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## General Scientific

### A BRIEF REFERENCE TO THE SURGERY OF THE ANTRUM OF HIGHMORE.\*

JOHN J. KYLE, M.D.,  
Los Angeles, Cal.

The nasal accessory cavities in relation to many systemic disorders are, among the great majority of physicians, an unknown entity, and this is particularly true of those diseases which are directly attributable to the gastro-intestinal tract. Only in a very few instances does the internist ever take into consideration any existent nasal disease as a possible factor in general disease, nor do we as specialists, who have the greatest opportunity for the examination of the nose, pay that attention to the accessory sinuses that it is certainly incumbent upon us to do. Unless, by history of pain or purulent discharge from the nose, our attention is called to the possibility of sinus infection, do we think of, or give any attention to the possibility of a suppuration in the maxillary antrum. Suppuration in the ethmoid or frontal sinuses readily manifests itself to the eye of the examiner and thus is easily detected, with the exception of the type designated "closed suppuration." We, as specialists, should make it a routine measure to inspect particularly the antrum of Highmore in all cases of nasal disease, and the same may be said of diseases of the throat, as the infection of the nasal cavity drains directly into the lymphatics of the throat. A suppurating maxillary sinus may give so little pain or distress that one is excused ordinarily for overlooking this possible spot of infection. Nor is diagnosis so easy that the average individual can, at the slightest glance, be able to detect a suppuration or infection of the antrum of Highmore.

That pus or secretion containing bacteria draining from the antrum directly influences the stomach secretions and adds to the flora of the gastro-intestinal tract is a recognized fact. Most diseases or perversion of function are due to infection, and the nasal cavity is more often the seat of infection than any other structure of the body. This is due to its peculiar anatomical position. It is difficult to enumerate all the causes, predisposing and exciting, of maxillary sinus disease.

Among the predisposing factors are faulty nasal drainage from adenoids and tonsils in youth, and, later in life, frontal and ethmoid disease; disease of the teeth and bad hygienic surroundings. A diseased tooth is probably the greatest predisposing factor. There are other causes, and possibly many of them, but the influence of the ductless glands upon sinus metabolism, as a cause, is given little consideration.

Reversely it may be assumed with good reason that a suppuration or infection, having its origin in the nose or throat, may be the cause sometimes of a perversion of function of one or more ductless glands and especially of the thyroid.

I presume that all organs or structures of the body are so co-related that the interference of function in one directly and indirectly influences the function of every other structure. Any interference of or loss of function of a structure is after a time probably compensated for in some way that we do not understand. The function of the thyroid gland is presumed to be that of a secretory organ and the secretions act normally by aiding and regulating the metabolism of the body, especially the nervous system. The character of the secretion, according to Pitfield, may be "wonderfully complicated" and influenced from within or without the gland.

The influence of the nose and throat upon thyroid gland disease is not particularly appreciated. In making this statement I am not unmindful of the investigations of Beebe, Shurly, Thiesen and Mygind, and their conclusions relative to the nasal and throat origin of infection as a cause of thyroid disease. In many cases the open canal of His allows infection to pass from the throat directly to the thyroid gland. The intimate blood and lymph supply between the thyroid gland and throat enables infection to pass from one structure to the other. That some cases of thyroid hypersecretion or hyperabsorption may be due thus to nasal disease is quite apparent. In many cases of thyroid disease and after ligation of the blood supply or removal of the glands, the symptoms persist though modified to a great extent. The thyroid disease may be a sequence, and back of the thyroid irritation some other area of irritation or infection producing the thyroid morphology may be present. Examination before operation on the

\* Read before the Pacific Coast Ophthalmological, Otolological and Rhinological Association, San Francisco, June 15, 16 and 17, 1915.

thyroid will often disclose a cloudiness of the maxillary sinuses, ethmoid disease, thick viscid discharge in the post-nasal space and diseased tonsils.

During the past year I have operated for the removal of diseased tonsils in three cases of typical Basedow's disease, and in two cases marked benefit resulted from the operations. The third case came under observation during the preparation of this paper. In the last case the right lobe of the thyroid had been removed a year before and the surgeon recommended ligation of the left. The right olfactory cleft was closed by a cystic middle turbinal. At one time the tonsils had been partially removed but were now of the submerged type, and cysts filled with debris and bacteria. The right middle turbinal was removed and cells destroyed, and tonsils removed. Operation on the thyroid was postponed. Within a fortnight there was a lessening of the general nervous symptoms and marked improvement in the physical condition of the patients. The good results justify the hope of speedy annihilation of thyroid symptoms.

Three years ago a young woman came to me complaining of great pain in her left maxillary antrum. She was, in addition, suffering from all the symptoms of exophthalmic goiter. The left antrum was full of pus. There was a deflection of the septum so pronounced that it was impossible to get a good view of the nasal cavity on the affected side. In this case the exophthalmic goiter was, from the history, preceded by some nasal disease. The typical symptoms of antrum suppuration, however, were manifest after the exophthalmic condition had appeared. This patient unfortunately was lost from view. There is no practical or scientific value in the detail of this case, but two years ago another such case came under my observation at the Sisters' Hospital in Los Angeles. When the patient was examined, the nose was full of thick yellow pus. It poured out in great quantities from both frontal sinuses. There was intense pain, tenderness on pressure in the region of the frontals, temperature and transillumination showed pus in the left antrum of Highmore. All the symptoms indicated the necessity of an immediate radical antrum and frontal sinus operation. The patient was suffering from extreme exophthalmic goiter. Characteristic nervous symptoms were profound, so much so that I could not see my way to operate without endangering the life of the patient. The tachycardia was becoming so pronounced that Dr. Dillon decided to operate upon the thyroid at once. The patient made an uneventful recovery. In a very short time the nasal symptoms began to disappear. There was no local treatment instituted, and today the patient remains free from any purulent discharge from the sinuses of the nose. In this case the nasal suppuration ante-dated the exophthalmic goiter.

Hypothyroidism is a condition that occurs before puberty, and if any of the sinuses play a part in the causation of this disease, it must be the maxillary. Adenoids and diseased tonsils no doubt play a part in the production of hypothyroidism. In young children, before the age of puberty, adenoids and tonsils are the greatest factor in preventing a free nasal drainage from the sinuses of the nose. The secretion of mucus that often fills the nasal cavity can be found probably filling the maxillary antrums and predisposing to disease of the developing ethmoid and frontal cells. Free nasal breathing is the most important factor in preventing sinus disease. One effect of removal of diseased tonsils and adenoids in children is to assure a normal secreting nasal mucosa and normally developed sinuses.

A point I want to emphasize is that the preservation of a normal functioning nose depends upon the early removal of enlarged tonsils and adenoids. There is a probability that in all acute or chronic affections of the ethmoid and frontal sinuses, the antrum of Highmore is also affected. The antrum from its position is involved in most cases of frontal sinus infection. Where the infection is confined to the ethmoids, the antrum may escape. In many cases of chronic ethmoid suppuration with beginning atrophy, the maxillary sinuses were, as far as I could ascertain, not involved. It may be presumed that physical abnormalities in nasal structures have much to do with extension of suppuration from one side to the other.

After the swelling of the mucosa of the nasal cavity has receded, following an attack of coryza, the maxillary antrum has a tendency to empty itself spontaneously. In those cases particularly who have passed the age of puberty, and in which we have deflections of the septum and a chronic catarrhal involvement of the frontal and ethmoid sinuses, we have a retention of secretion in the maxillary antrums. And even where the secretion is retained it may give rise to little or no distinct localized symptoms. A sour, foul breath may be the only indication of retention of secretion in the maxillary antrums.

Oliver St. John Gogarty of Dublin in the *Journal of Laryngology, Rhinology and Otology*, January, 1915, (Page 11), makes the statement that he "has never found an empyema of the frontal sinuses unaccompanied by one of the antrum of Highmore." Most of these cases have a tendency to disappear after the frontal infection has been removed by establishing good drainage. Where a chronic purulent infection of the frontal sinuses has existed for a very long time, the maxillary antrum suppuration will be present. To cure this lurking condition, a radical intra-nasal antrum operation will be necessary. It is my observation that in many cases of so-called grippe infections, a cloudiness is found in one or both antrums which appeared to be the only source of infection. In many cases of La grippe, all the sinuses may be involved. Were it not that a certain amount of danger accompanies puncture and lavage of the antrum, and more or less pain is produced by the operation, it would be advisable to resort to this method of diagnosis more often than we do.

Onodi in the *Laryngoscope* for November, 1909, quotes the statistics of Birsch-Hirschfeld, who up to that time had observed four hundred and nine cases of inflammation of the orbit following sinus infection. Blindness resulted in sixty-six cases, and he stated that the most frequently resulting blindness is in cases of empyema of the antrum of the Highmore—twenty-seven per cent. I have never seen a case of blindness from suppuration of the antrum of Highmore, but I have observed cases of blindness from suppuration in the posterior ethmoid cells.

A diagnosis of antrum disease, as remarked above, is not always easy, unless it be a case of acute fulminating infection which is a rare condition as compared with chronic antrum disease. Serous inflammation or catarrhal inflammation cannot be diagnosed by transillumination or x-ray. Where pus is present, it is possible in most cases to diagnose its presence by transillumination, though this is not always satisfactory. Inability to get the red pupillary reflex in transillumination is suggestive of maxillary sinus disease. When the pupil is well illuminated in transillumination, the antrum is free from pus, disease of the muco-periosteum or neoplasms. The x-ray will give more satisfactory conclusions. Punc-

ture and lavage, however, will enable us to diagnose either a serous or purulent condition of the antrum. There are a few cases where we have marked edema of the muco-periostium, in which it is almost impossible to force fluid from the antrum into the nasal cavity. In some cases the operator may have passed the trocar too far into the antrum and into the swollen mucosa of the external wall; and in other cases the pus may be so thick that it is difficult to force it through the normal ostium. Finally, the antrum may be subdivided by septa that make it difficult to irrigate successfully.

The trocar that I prefer for exploratory puncture and irrigation is one devised by Norvell Pierce. It is curved, and we think an easier instrument to handle than the straight Lichtwitz trocar.

The anesthetic used is first an application on a cotton-tipped probe, about the lower meatus, of a twenty per cent. solution of cocain, following this with an injection as far as possible into the mucous membrane at the junction of the anterior portion of the lower turbinate bone with the lateral wall of the nose and beneath the turbinate body, of a few drops of a two per cent. solution of novocain and 1-10,000 adrenalin.

The trocar is inserted as nearly as possible on a line drawn vertically through the middle of the lower turbinate body and high up in the meatus. This is the only safe point for penetration of the antrum. This applies particularly to patients who have erupted their first molars. Before this time, according to Zarniko and Onodi, the antrum should be entered from the middle meatus. There is an element of danger as referred to, in puncturing either through the lower meatus or middle meatus. In either region the operator may enter the orbital cavity.

The naso-antral wall varies in thickness in individuals. If too much force is used in passing the cannula, the trocar may pass beyond the confines of the antrum. A. Brown Kelly in the *Journal of Laryngology, Rhinology and Otology*, December, 1914, reports a case of death following puncture and the forcible injection of air into the antrum. In this case there was a rapid swelling of the neck muscles, the larynx, violent jerking of the leg on the affected side, rapid and shallow breathing, and finally death. Kelly also reports a case observed by Neuenborn, in which the patient died after puncture of the antrum. It was attributed either to cardiac failure or to cocain poisoning.

I have had two cases in which the orbital cavity was entered by mistake while trying to pass a Killians trocar through the middle meatus. In both these cases the watery solution was injected into the orbital cavity. There was sudden edema of the lids and bulging of the eye-ball. In both these cases I quickly made punctures into the skin and subcutaneous tissues of the lids, and by manipulation was able in a short time to restore the tissues almost to the normal. No untoward symptoms followed the accident. I rather incline to think that one should not attempt to pass a trocar through the middle meatus unless he is a skilled rhinologist.

I do not believe in forcible injection of air into the antrum. There is too much danger of producing air embolism and emphysema of surrounding structures.

Those who have overlooked Dr. Kelly's interesting article, in which he enumerates nine fatal cases and thirteen accidents due to puncture, perforation, or washing of the accessory cavities, should not fail to read it carefully.

Before irrigating the antrum, it is best to shrink the tissues round about the natural opening with a strong solution of cocain and adrenalin. If there is very much

edema and swelling of the natural opening, one will have great difficulty in forcing fluids out of the antrum. There is no way of estimating the value of one or two punctures and flushings of the antrum in a chronic suppurating disease. The real status of the teeth as an etiological factor cannot be discovered except by a skio-graph. If the teeth are not at fault and dentigerous, or cysts of the alveolar process are absent, and the disease is due to an infection of the antrum alone, local application of cocain, adrenalin, mild silver salt, to the middle turbinate region and ostium maxillary, and one or two flushings may cure the disease, or at least relieve all symptoms. If local treatment, and if five or six flushings for a fortnight do not relieve all symptoms, some radical operation is indicated.

Diabetic or tubercular patients with antrum suppuration seem to get along quite as well after antrum puncture and irrigation as those without any apparent constitutional disease. I have no particular choice of solutions for irrigating, and use either normal salt, lysol, iodine, or iodide of mercury.

#### A SIMPLE METHOD OF ABORTING MIDDLE-EAR INFLAMMATION AND INFECTION LEADING TO MASTOID ABSCESS.

FRANK E. MILLER, M. D.,

New York.

For the past twelve or more years, the writer and his two assistants—although treating a large number of cases, daily—have had no new cases of middle-ear or mastoid abscess. By that is meant not one case that has come to us before suppuration had been formed, has been allowed to result in abscess. In other words, the pus-forming and mixed-infection elements, which, although tending towards, and, by natural process, unrestrained, would have resulted in abscess, have been aborted.

Believing this record and my method of securing these results would be of interest, not only to those engaged exclusively in ear, nose and throat practice, but also to the general practitioner, who, of necessity, must see and treat such cases from time to time; this brief article is offered in the hope that it may be helpful to others.

The general practitioner knows full well the tendency of middle-ear infection, suppurative and non-suppurative, to eventuate in abscess, and to extend to, and involve, the mastoid cells. A practicable, safe means of preventing such involvement, with its serious complications may be described as follows:

R Morph. Sulph. ....gr. 1/4  
Atropin. Sulph. ....gr. 1/150  
Sol. Adrenalin Chloride....gtt. x  
Petrolati q. s. ad (Sten'l).....3i

The internal ear is first cleansed as thoroughly as possible, preparatory to the application of more affirmative remedial measures. A sterilized eustachian catheter, covered with Meg. M. A. A. Co., morphin and atropin sulph. (gr. 1/4 and 1/150) is inserted into the internal ear, and any pus or other infectious material drawn off by aspiration. This preliminary step, for obvious reasons, is important.

The patient's head is now reclined upon a pillow, so that the external auditory meatus presents what may be likened to the flaring part of a funnel, formed by the auditory canal.

Into the canal is placed a four per cent. solution of cocain, so that if the tympanum is intact, there is a small "puddle" of the solution into which from two to four hypodermic tablets (containing morphin, gr. 1-4,



atropin, gr. 1-150, each) are dropped, and, as the cocain anesthesia permits, gently stirred in the solution until fully dissolved. The cocain is for quick anesthesia; the morphin-atropin combination to prolong the anesthetic state during, and after, the further treatment.

A small can of cataplasma kaolini, technical name indicating antiphlogistine, previously heated in a water-bath or pan of boiling water, is made ready. When at a comfortable temperature, a piece of sterile absorbent cotton is loosely wound around a wooden tooth-pick, or other clean stick, (of just sufficient size to go into the ear-canal up to the tympanum, but not large enough to irritate or impinge on the sides of the canal) and the remedy smeared over the cotton. This is then carried into the ear and carefully placed there, and a pledget of clean cotton placed over all to protect the ear-cavity from without. The application is allowed to remain in situ for forty-eight hours, before removal. This must be insisted on to secure the results desired.

At the expiration of the forty-eight hour period, the ear is washed out, and the otitis media, mastoiditis, etc., have disappeared. Please understand, the remedy is placed right into the ear-canal, through the external meatus. This, on account of the anesthesia already secured by the cocain and morphin-atropin applications, is practically painless, and hence practicable. If the tympanum should be so swollen and bulging and immediate destructive process is indicated so that it cannot be saved it can be punctured without any pain under this local anesthesia. There is nothing harmful in this application, and I have never had any untoward results from the use of the above mentioned preliminary treatment for securing anesthesia. Even as high as four tablets of the morphin-atropin combination have been safely used in cases of children, even with perforation, but I would distinctly advise against morphia and atropin tablets or otherwise in case of perforation of tympanum it might be large enough to allow leakage into mouth causing nausea and sometimes poison to patient. This so anesthetizes the ear as to make the application and packing of the remedy tolerable. Without this precaution the patient could not endure the packing of the ear with the remedy mentioned. Usually, after the case is treated in this manner, the patient goes off to sleep for several hours, and, when the packing is allowed to remain in place, undisturbed, for the forty-eight hours, the patient remains fairly comfortable. If it is removed, as has been done in some instances, by other medical attendants, the pain is severe, and the whole thing must be done over again. From my personal experience, therefore, I am able to state that it is the most certain painless and practical method of treating and aborting middle-ear and mastoid complications I know of, and its apparent success leads me to send this to you, and trust the adoption of this method will lead others to the same success I am having.

22 West 31st Street.

Calmette says that 90 per cent. of children from 5 to 15 years of age, and from 91 to 97 per cent. of young people above that age are affected with some form of tuberculosis. Von Pirquet states that 90 per cent. are infected in the first year of life.

Women sometimes suffer a loss of tone of the uterine muscle, which is always associated with menorrhagia. This condition can be cured with pituitary extract.

Demme found tubercle bacilli in the vaginal discharge of an infant of five months.

## STUFFY EARS.

HAROLD HAYS, M. D., F. A. C. S.,  
New York.

A fullness in the ears is due to a number of causes and patients frequently consult a physician stating that their ears feel "stuffy." On many occasions this is but a slight inconvenience which disappears in the course of a few hours by the automatic opening up of the eustachian tube and the resumption of the proper air pressure. However, such a condition should not be passed by lightly, particularly if it recurs at frequent intervals or is persistent. I have known many a person who, having neglected such a condition, was afflicted with permanent deafness.

When one is in bathing in the summer time he frequently gets some water in the ear canal and this stuffs up the ear. If the water runs out of its own accord nothing need be done, but frequently it finds its way behind some wax which is pressed up closely against the drum and any attempt to remove it is likely to cause an inflamed condition of the canal or of the drum itself. In such cases on inspection the otologist can readily see the obstructing mass and remove it by proper syringing.

However, this is only in the simple cases of stuffy ears. Many times after bathing a person thinks that the fullness is caused by some water in the canal when on the contrary it is due to some water having found its way into the middle ear. In such cases an inflammatory reaction may result which is of sufficient intensity to cause an acute inflammation. If it does not do this a subacute condition may be set up which cannot be relieved by simple methods but must be treated with caution, even by the otologist.

People frequently complain of stuffy ears in connection with colds in the head. Under such circumstances one must be very careful not to allow any of the infectious matter in the nasopharynx to enter the ear cavity itself. The stuffiness is due entirely to the inflammatory condition of the mouth of the eustachian tube which has closed off the middle ear cavity from the nasopharynx. In such instances inflation of the ear carries with it a great deal of danger and one must be content to keep the nasopharynx clean and to shrink the mucous membranes of the mouth of the tube. When the conditions get to the subacute stage careful treatment of the ears is necessary. I have never seen any case of this nature which did not respond to proper treatment, which sometimes may have to extend over a period of four to eight weeks.

Chronic stuffy ears usually are associated with some deafness and frequently with tinnitus. A dullness in the ears is an indication on the part of nature that the ear cavity is not receiving its proper massage. As a rule there is a chronic thickening of the mucosa of the eustachian tube which must be overcome in some way if one wishes to effect a cure. Proper dilatation of the tubes can be accomplished by inserting suitable sounds and bougies, and under no circumstances should forcible inflation be used in such cases, for the ear drum may become relaxed as a result of the inflation and cause a worse form of deafness than the one that previously existed.

11 West 81st Street.

Thyroid insufficiency, as an expression of exhaustion, is a concomitant of Graves's disease, the condition thus presenting the successive stages characteristic of thyroid instability.



## RETROVERSION OF THE UTERUS.\*

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Brooklyn, N. Y.

Retroversion is a tipping of the uterus backward from its normal position. The promontory of the sacrum may be regarded as the dividing point between normal and pathological positions of the uterus. Retroversion is a displacement of the organ. Retroflexion is a deformity. They often occur coincidentally but the method of treatment of the version is considerably different, when a flexion is a complication. The majority of gynecologists distinctly hold to the opinion that displacements of the uterus constitute a pathological condition and in themselves institute secondary pathological changes of serious import.

The change of the position of the uterus interferes with its circulation, and nutrition, producing chronic congestion with thickening and hypertrophy of the connective tissue. This results in disturbances of menstruation, leucorrhea, pain, and sometimes sterility. Reflex disturbances are also attendant upon this condition. The reflex disturbances are very much worse where the ovaries are prolapsed underneath a retroverted uterus and subjected to the pressure from above.

Modern gynecology has stricken anteversion from the list of pathological conditions. Anteversion is in itself a deformity, not a displacement. As a rule, in these cases the fundus is found in normal position and the cervix bent sharply forward into the axis of the vagina. The organ is out of shape, but its pose in the pelvis is normal. It requires straightening rather than change of position.

The treatment of retrodisplacements of interest to the general practitioner consists in topical applications of glycerin, ichthylol and glycerin, boroglycerid in glycerin or some astringent preparation in glycerin. The ichthylol is especially indicated in cases of great sensitiveness and pain. The astringent preparations are of use where there is pronounced relaxation of the vaginal wall. Tampons are best made from lamb's wool and small chain tampons are better than large tampons used singly.

With proper care of a retroversion in a patient with a good pelvic floor, after the reduction and the relief of the congestion a pessary may be worn with comfort for years if it is removed and cleansed at least every two or three months. The most useful pessaries are the Albert Smith, the Emmett and the Hodge. If the patient does not return to the physician's office and is not careful of her hygiene, a pessary may do considerable damage in the way of ulcerative areas from crystallization of the vaginal secretion or from crystallization of substances used in douches. Some years ago we had a patient in this gynecological service with a pessary imbedded in the vagina so that it was necessary to cut the bands of vaginal adhesions in order to remove it. This pessary was introduced by the late lamented Dr. Walter Corcoran, to whom I spoke regarding the patient. He remembered introducing the pessary some two years previously and never saw her afterward.

Coming to the operative treatment of retrodisplacements, the procedures that have been devised by the

genius of different surgeons run almost into countless numbers. There are two general classes of procedure: first, those which utilize the ligaments of the uterus, and, secondly, those in which artificial ligaments are formed.

In the first class are shortening of the round ligaments by pulling them out of the inguinal canal, as the Alexander or the Alexander-Adams, and the intra-pelvic shortening by folding them on themselves and stitching them in that position.

Done through an abdominal incision, we have three names attached to slightly different procedures, the Wiley, the Mann and the Dudley.

Done through a vaginal incision, we have three names, Dührssen, Mackenrodt and Goffe; or the methods of Noble, Ferguson, Simpson, Montgomery and Gilliam. Of the last five the Gilliam is the simplest. The Simpson-Gilliam is much preferable to the Gilliam as there are no artificial bands formed, the ligament being brought up between the two layers of the broad ligament before bringing it through the abdominal wall to its new anchorage. The latter has been modified in my clinic by bringing the ligament not only between the layers of the broad ligament, but also bringing it through the canal and fastening it to the tissues at the external ring.

The second class are the suspensions of the uterus by the methods of Olshausen, Tait and Kelly, or the vaginal fixation of Schucking and Dührssen.

Development is now going on along the lines of the use of the uterosacral ligaments instead of the round ligaments. John Van Doren Young of New York has probably done this procedure to a greater extent than any other gynecologist in the East. But notwithstanding the work on the uterosacrals, the round ligaments are still the favorite point of attack. Of the methods the one most generally used is the intra-abdominal shortening and the one that I recommended in this clinic is the Simpson-Gilliam or the modification previously spoken of, whereby the ligament is brought out through the canal, but in our work we still prefer the original classical Alexander procedure. We admit that we have made mistakes, but they were mistakes of omission, not of commission. They were mistakes of fault in technique, or fault in our primary diagnosis. The fault in technique has been in a class of cases where there has been a long standing retroflexion complicating a version. In these cases we now advise and use a stem pessary in order that the version may be straightened and kept straightened and thereby achieve the desired results from the Alexander. The other class is where we have made a diagnosis of movable retroversion without adhesions of the tubes or ovaries, and have subsequently found a continuation of the pain previously complained of and undoubted evidence of an adhesion of one or both appendages. I have recently had this experience after having done some seventy Alexander operations. This would teach me to advise others that where there is any doubt, that the abdomen should be entered; I go through either by vaginal section or through an abdominal incision to complete the diagnosis and loosen probable adhesions, and then proceed with the classical Alexander operation. This can easily be done by the method used and recommended by Dr. C. C. Barrows of New York of a Pfannenstiel skin incision and a longitudinal fascial incision for abdominal exploration. The plates presented in this article are copies from the plates of Dr. Barrows.

\* Gynecological clinic given at Kings County Hospital, May 14, 1915.

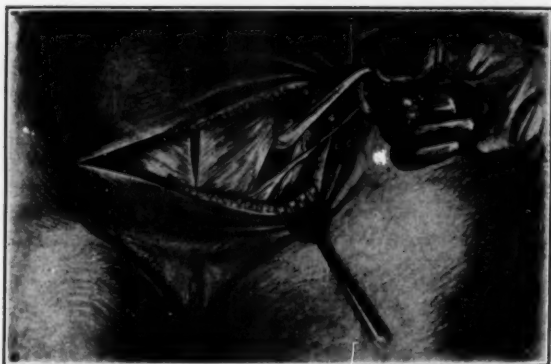


Fig. I.

In performing the Alexander operation, locate the pubic spine and make an incision about an inch and a half long, upward and outward in the general direction of Poupart's ligament and down to deep fascia. Make it as bloodless as possible by quickly catching all bleeding points. There is often a vein running across the upper end of the incision which can be grasped before cutting. This advice is important for if the tissues become blood-stained it is much harder to find the ligament. The fat is rubbed away from the deep fascia with a dry sponge and the external ring exposed, where will be found a pouting of fat; then, if the cribriform fascia is incised, one can easily pick up the ligament with a blunt hook. On its outer side one will see the genital branch of the genitocrural nerve. This should be separated and avoided, if possible, in subsequent procedures. The ligament is gently drawn out through the canal, stripping the peritoneum back. If this is not done, it makes an artificial sac, the canal of muck, for a possible future hernia. This is done on both sides, the ligaments being pulled upon until the fundus is felt through the abdominal wall; the excess of the ligament beyond the external ring is cut away and it is sutured on both sides to the pillars of the ring, the fascia matted over it and the skin closed with silkworm gut sutures through and through, the middle of the suture grasping the deep tissues, or the skin is closed by means of clips or a subcuticular suture.

Of the cases which we have done in our clinics we have had three recurrences, the one above referred to where adhesions of the appendages were subsequently found, another where we had a short anterior vaginal wall which should have been lengthened by the Reynolds procedure previous to doing the Alexander, and the other case was one of retroflexion where

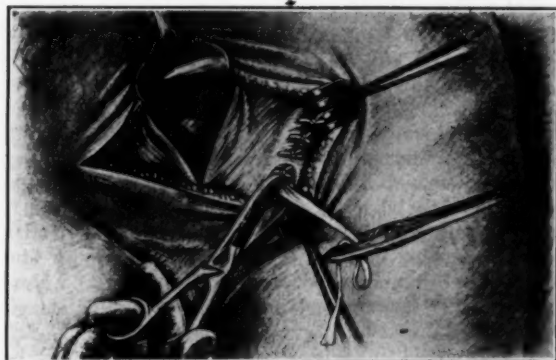


Fig. II.

a stem should have been introduced. The great advantage of this operation is that the abdomen is not opened. This is used by many surgeons as an argument against the operation, but we must learn to have some confidence in our diagnostic ability. Another great advantage of the operation is that it has never been known to cause dystocia in subsequent pregnancy.

There is one class of retroversions that will not be benefited by the usual office and home routine treatment or by operative measures. Those are the small infantile uteri with congenital displacements.

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## SEX-HYGIENE—WHY, WHERE AND WHEN IT SHOULD BE TAUGHT.\*

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Anatomists and physiologists have given much attention to the comparison of the structure of woman with man, and we are in possession of a mass of detail which goes to show that there always has and always will exist certain pronounced physical differences, the analysis of which must convince any investigator that in some respects the sexes can never be physically equal. Woman is far superior to her brother in perception and intuition, and is possessed of greater fortitude, patience and constancy.

In all that relates to children she is physically and mentally the superior of man and is in this respect the highest human type.

In all plans and projects for the betterment of woman's condition we cannot lose sight of the natural division of the sexes or the divine plan and order for the perpetuation of the race. It is claimed by many high authorities that the higher education of woman acts as a detrimental influence in their first great function, that of becoming mothers.

If this be true, there is something wrong in the educational plan. How are we to arrive at a basis of education for women which shall not impair her functions and desires for maternity, and shall nevertheless develop her mind and capabilities to an equality, and even superiority, in the inception and inauguration of political, moral and social reforms? In determining upon a rational curriculum we must be governed only by the relative values of knowledge and what concerns us most to know. The evidence continually before us shows that more value is attached to aesthetic culture in our schools for girls than to the solid scientific studies which form the groundwork of usefulness and develop reflective and inventive ability. Painting, music, sculpture, poetry, literature and the belles-lettres cultivate the emotional side of the girl's nature, raising up ideals instead of realities.

This is, to my mind, the vice of our plan of education for girls. It neglects the plant for the sake of the flower.

I am an advocate for the teaching of the sciences to our girls. History, classics and the languages keep the mind in a constant attitude of submission to dogmatic teaching, while science appeals at every step to the individual reason. What do you think would be thought and said of our modern text-books if they could fall into the hands of some professor of a greater race coming after us in the remote future?

\* Abstract of a paper read before the Society of Medical Jurisprudence, New York.

He would find in them elaborate treatises on many subjects, but no word as to the bringing-up of children and no hint in the developing of the student's mind, that in God's Providence they were ever likely to become parents. What do you think of a man who without any previous training proposed to control the engine that draws the train or propels the steamship we travel in? Yet the most of parents, to whom is entrusted the care and development of the most intricate and delicate of all God's handiwork, come to the task without any previous preparation and training and in absolute ignorance of the first principles which ought to enlighten and guide them. Is it, then, that the unfolding of a human being in body and mind is such a simple process that any one may undertake it with no preparation whatever? What can we expect of our girls as mothers, when we educate them in schools where not one idea is given them of any wise methods for training the opening mind of childhood, and where the discipline does not in the least aid them in thinking out methods of their own? As a gynecologist, I know the time is ripe when those who have influence should exercise it to the end that our girls shall have timely advice and instruction in some of the inevitable physiologic functions entailed upon their sex.

The most important and critical period in a girl's life is the transition from girlhood to womanhood, and it is at this epoch that the first errors in dress and deportment are committed. These errors impair the health and destroy the physical equality which, up to this time, has existed between the sexes. From the ages of ten to seventeen years, our girls should have good nourishing food, of the most easily digestible kinds and unrestricted; free, open-air exercise; and those who are averse to free playgrounds and their companions should have daily calisthenics or gymnastics at home, or in a proper institution under a tutor. They should be kept as much as possible from emotional excitement, care and anxiety, and all intellectual effort that is laborious and absorbing should be studiously avoided. This implies that their school course should be considerably modified from that of boys, and their attention directed more to physical culture, and the mental deferred until the full development of the generative organs, and until the menstrual function is regularly established. While carrying out this regime, acquaint them with the reasons for it; instruct them in the anatomy and physiology of the pelvic organs, for I firmly believe that if our girls knew something of themselves and the functions peculiar to their sex, and were instructed to care for themselves, the gynecologist would have less to do and the number, quality and character of the race would be improved.

American parents have shrunk from any consideration of this subject from time immemorial. Many times when I have broached to a mother the subject of acquainting her daughter with the fact that she was approaching puberty and soon would enter upon her age of menstruation and how to care for herself during this period, she has confessed to me of having often thought of the need of doing this, but that she shrank from talking to her child upon these subjects and asked if I could not do it for her.

There is no prominent gynecologist who has not met serious disorders that could be traced to errors due to ignorance of proper care to be observed in this important period in a girl's life.

In Paris there came under my care a daughter in

a wealthy English family, who came to her first menstruation in complete ignorance of any such physiologic function, and believing she was about to die from internal hemorrhage, fainted; recovering consciousness, she screamed in terror and fainted again; revived by her mother, she went into convulsions and fourteen years later, when brought to me, was a nervous wreck. I could multiply these cases in variety and cause.

Why is it that these subjects are considered from such a totally different point of view in France and America? In France subjects which we banish from all but intimate conversation, are discussed with a perfect freedom at any place and in any company, without a thought of embarrassment.

I recall on one occasion taking a lady in to dinner, whose husband in after years became the prime minister of France, and who, knowing me to be a physician and a foreigner and wishing to put me at ease by talking of a subject with which I would be familiar, detailed the incidents of the recent accouchement of her sister, the difficulties encountered and how she was badly torn and with a freedom from any hesitancy that could but arouse profound admiration in an American mind at her poise and the absence of all self-consciousness.

I know the opinion in general prevails that the French are a highly immoral people, but having been educated at a French university and having lived in intimate association with that people fifteen years, I am free to assert that there is infinitely more gross and sordid immorality in the United States than in France, and pro rata, statistics show the number of divorces are less there than here. Why should we not delegate the teaching to those to whom is entrusted the other branches of their education in our public schools?

Probably no public teacher has had more to do with the public discussion of the teaching of sex-hygiene and generation than James E. Peabody, Chairman of the Department of Biology, Morris High School, New York, and I quote from an article published by him November 1914 in the *Educational Review* entitled, "Some Experiments in Sex Education," setting forth ten propositions presented before a meeting of the "New York Association of Academic Principals," and again before the Richmond Conference of the "Department of Superintendence of the National Education Association," as follows:

1. The normal child seeks to know the source of his being, and naturally questions his father or mother.
2. The average parent either silences all questions relating to these topics or is evasive in his answers. Seldom does the child get any satisfaction from this source.
3. The child, therefore, turns to other sources of information, and two unfortunate results follow: First, much of the information he gets is untrue; and, secondly, the parent loses a great opportunity to keep in sympathetic touch with some of the most vital problems of his child.
4. There are two reasons, at least, for this "conspiracy of silence" on the part of the parent: First, his ignorance of the significance of the essential facts of the reproductive process; and, secondly, his incapacity to expound this subject, largely because he has no scientific vocabulary in which to express himself.
5. Both these needs of the parent of to-morrow should be supplied in biological courses that treat of the function of reproduction as a universal and beneficent process of all living things. And we might add that biology is the only subject in which these facts can be presented in a normal way.
6. Not only does the child need to know in clean and wholesome terms the essential facts of reproduction, but even more through the stormy days of youth does he need parental counsel. At this time the mother should give wise counsel to the daughter. The father, too, should explain to the boy the mean-



ing of physiological phenomena which frequently frighten the youth and drive him to the quack doctor.

7. The fearful prevalence of venereal disease is becoming an increasing peril to our civilization, especially in cities. Most of the cases of blindness of the new-born are due to this cause. Yet the average parent gives absolutely no warning to either son or daughter of this peril.

8. It is, therefore, evident that in every community the teacher, the physician and the clergy should do all in their power to arouse the parents of to-day to some sense of their responsibility in these matters. This may be done by talks with individual parents, by small conferences of interested fathers or mothers, and by a distribution among parents of carefully selected books or pamphlets in which the facts are presented in a thoroughly wholesome fashion.

9. It is entirely practical and wise, in my judgment, to present in elementary courses the explanation of the reproductive processes of plants and of animals, even as high as the birds, and boys and girls in many cases are able to apply the facts and principles thus acquired to the reproduction of human beings.

10. Sex hygiene, however, is an entirely different matter. It involves discussion of the personal problems of girls and boys, which most of them have not discussed even with parents or the family physician. *And it is this aspect of sex education which we, as teachers, hesitate to enter upon in the classroom, at least until a somewhat clearer trail has been blazed for us. Yet it is this very practical kind of instruction that is sorely needed by our boys and girls.*

In New York City over 40 per cent. of the high school pupils are taught in classes where boys and girls recite together, and in the smaller cities and towns of the country mixed classes are practically universal. But, urge the advocates of sex hygiene, we should separate the two sexes and then give the necessary instruction. If much definite teaching of the subject is to be given in the public schools, this separation must of course be made, *but experience has shown that when one part of a division is isolated for special instruction, unfortunate self-consciousness on the part of pupils seems to be the inevitable result.*

*To be successful here mere knowledge is not enough. The problem can be solved only when parents, pastors and pedagogues co-operate wholeheartedly in this great movement.*

Here is where this eminent educator and I part company. I do not agree with him that *"To be successful here mere knowledge is not enough,"* quite to the contrary in my judgment it is enough and all that can be expected and in any event and under almost any conditions or circumstances all that can be accomplished.

Who, among us, are the most occupied with the thought and discussion of the needs of education in this department of knowledge? Is it the physician, clergyman, parent or public teacher? Every important department in any great business is placed under the management of one head and he is held responsible for results. How and when do our educators think we will arrive at any fixed definite results by recommending that *"The problem can be solved only when parents, pastors and pedagogues co-operate wholeheartedly in this great movement."* Divided responsibility is no responsibility.

It is perfectly logical that the public school teacher should teach biology in its entirety and sooner or later the pendulum of discussion will cease its vacillation and come to rest in this result.

Frankly it is my opinion that the expression of attitude on the part of our educators toward this subject springs from the same source of false modesty and hesitation that has characterized this one subject from time immemorial. When we come to the exposition of the delicate anatomy and complicated physiology of the eye and ear and later consider the abnormalities and diseases to which those organs are subject, why should we not hesitate and stumble in our selection of language and be overcome by self-consciousness and embarrassed by confusion, as all the papers published by our educators and essayists would lead us to believe

is the stumbling block in the way of teaching the anatomy and physiology of the generative organs?

Why is it that we reserve for the subject of generation and sex hygiene the unique condemnation of banishment from consideration and discussion that we freely give to all other subjects?

The fact of the matter is that this false attitude and conception is the result of generations of a false and mistaken sense of modesty and refinement. *In no other department of knowledge is ignorance called innocence.* In my judgment the mistake our educators make in their attitude and public advice on this subject is two-fold.

First, they seem to think instruction in this subject must be given in a different way and through different channels from any other subject.

Second, they seem to anticipate that the instruction will produce results differing from those in all other departments of knowledge.

It is difficult to escape the conviction after reading published opinions that the authors are afraid of the subject and are undetermined just how to attack and handle it. When this mental fog is cleared away they will come to the view that the teaching of sex hygiene and generation in no wise differ from any other department of knowledge and that safety most surely lies in teaching the student in the same matter-of-fact way that any subject is taught leaving the resultant benefit to be worked out by the individual student the same as he analyzes and applies all other knowledge, the effect differing in each as is the case in all other subjects studied.

If the boys and girls are separated for the classes in biology in the beginning and throughout all its teachings, there is no reason for self-consciousness on the part of either teacher or student when in due course these subjects are reached, and there are any number of medical teachers who could prepare text books for its teaching that would be above criticism.

It would be an easy matter to depict in simple language the menstrual function and the simple rules to be observed for its care and become as much a routine of study as any other item of information, and whereas the majority of mothers find it difficult and even impossible to bring themselves to talk to their daughters on these matters, the public teacher freed from the intimate relationship can approach this subject with the same freedom that attaches to any other, and then would follow in natural course and at the proper time the study of the laws of generation. In a subject which has for so long a time been under consideration and has engendered such active discussion, it must be expected as a result that at the outset of its introduction into our public school curriculum, more or less opposition will appear and the teachers will not feel the same degree of detachment and impersonal interest that marks other subjects; but this will be but temporary and soon the new innovation will become as much a matter of regular routine as all other instruction.

Moreover, any possible opposition by parents to the teaching of this subject can be met by making the course at first elective; in due season as results of this teaching are made evident, this attitude of reluctance and opposition on the part of some parents will disappear and the regular teaching of sex hygiene and the laws of generation will be accorded the accepted and honored place in our course of public instruction to which it is entitled.

# THE NECESSITY FOR CO-OPERATION BETWEEN THE VOCAL TEACHER AND LARYNGOLOGIST.\*

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During the past year we have all felt within us a reflection of the indescribable suffering now going on across the great waste of waters. However we may try to put the thought of war out of our minds, it has risen before us like a specter in the night, it has struck depths of emotion and grief of which we were only dimly conscious heretofore, it has softened and humanized us.

And yet even war as horrible, as terrifying, as devastating as it is, has its amenities. There is in every great catastrophe, in every holocaust, however quickly and ruthlessly it swallows up the bodies and souls of men, a brighter side which in no sense completely balances or makes up for what is lost but which serves to soothe the mind and heart and makes us better able to bear its heavy burden of woe. It is an illustration of how good may, after all, come out of evil.

But I would not sadden your hearts on this occasion by a recital of the woes of humanity. I intended merely to touch upon the war situation as it is likely to influence two great fields of human activity—music and medicine—medicine because that happens to be my chosen profession, and music because that is the profession to which most of you are devoted, and one in which I am, as you know, very greatly interested, particularly in its vocal aspect.

In both of these sciences, for music is a science as well as an art, we are obliged to hark back to old Europe for our historical and evolutionary bearings. For many years Paris was the one great medical centre. Here it was that Oliver Wendell Holmes and other famous physicians had their early training. It may be news to some of you to hear that Holmes was an ardent student and a great teacher of medical science, and yet we have numerous passages from his writings and glittering phrases from his note books showing how he strove and delved and worked both at the dissecting table and at the bedside during two years of residence in the famous French capital.

From Paris the medical center of Europe shifted far south to Vienna, that lazy, care-free metropolis, where I myself found inspiration for research in new fields and an overwhelming desire to cultivate many a neglected angle in fields that I thought were old. In Vienna, despite any apparent indifference to what we love to call the "mad rush" of New York or Chicago, there is a gospel of work that is infectious to the last degree. To that city have gone from cities and towns of our great West and South hundreds of men and women in pursuit of advanced work both in music and medicine. A casual observer will find them apparently doing nothing but enjoying "kaffee klatch" in mid-afternoon of a bright summer's day, but if you sit down and talk with them you will find that the hour spent there is for the most part an hour of reflection in which the past is carefully introspected and plans for the future mapped out with an all-absorbing enthusiasm.

So much for the superficial glimpse of the made-in-Europe variety of professional purpose. But we may reasonably ask "How is this war going to affect the European cities as teaching centers?" Some say not at all, that as soon as the war is over there is going to be such an influx of American students as the Old World

has never before seen. Of this I am doubtful. During these months of prohibitive globe-trotting I believe that America is going to be discovered anew, that the mantle of Elijah is going to fall upon Elisha anew, and that the nuclei of learning exemplified by so many of the good young minds in this country are going to divide and sub-divide until a new race, a new generation of enthusiastic students is grown on American soil and has taken firm and everlasting root here. For this we will need to change our national character somewhat. We need to be more serious in our efforts at home, to give up our careless sloven ways of speech, to turn a deaf ear to "ragtime" and other forms of prostituted art, to do our own thinking and to cultivate a greater sense of assurance in what we are capable of accomplishing. This seems to be a great and impossible task you say. I answer that there is no task too great or too impossible for young and vigorous America. Our energies are elemental, dynamic, intuitive. They seek expression in thousands of ways, blindly perhaps, yet ever ready to be brought out into the light and like light itself made radiant by a mysterious, inscrutable force. We have initiative in plenty, what we need is intelligent direction. I feel confident that with such potent forces in American music as Dvôřák and Gustav Mahler, Karl Muck, Josef Stransky and others whose names are known to you all, we have an impetus toward the establishment of a selective and creative musical sense which in a few short years is destined to become traditional with us.

When I first began to pay attention to the vocal problem and came into closer contact with teachers of singing I was at a loss to understand the basis of antagonism which apparently exists in some quarters between the teacher and the laryngologist. Instead of a spirit of friendly co-operation there seemed to be a watchful and jealous eye under which the pupil was obliged to exist. Teachers were blaming nose and throat specialists for performing unnecessary operations, ruining voices, giving singing lessons, undermining the influence of the teacher over his pupil and of raising havoc generally. The laryngologist on his side indulged in disparaging remarks and showed other evidences of disregard for the members of what has come to be a profession closely akin to rhinolaryngology. In each and every case I found that the accusers had no intimate knowledge of each other's work, of the problems they were trying to solve or of the difficulties to be overcome. It was manifest that few physicians have ever visited a vocal studio to watch the actual work of instruction and that the teacher was equally uninformed of the specialist's viewpoint in the management of nose and throat conditions.

One thing, however, is certain, namely, that both have at heart one common aim, one definite purpose—the welfare of the pupil. Many a singing teacher devotes hours and hours in an attempt to build up a voice which to the casual observer seems to offer little hope or promise, and this without one cent of reward. Unfortunately, too, such efforts are sometimes rewarded by no sense of gratitude on the pupil's part. On the contrary one may see such utter lack of appreciation as to shake his faith in human nature. But the teacher, like the physician, takes it all as a part of the day's work and plods along doing his stint of work as best he can from day to day. When we think of the long apprenticeship, the hard struggle for recognition, the relatively short career and the rapid decline we must in all justice condone much in singers that would in others be quite inexcusable.

The burning question is after all, "How long is a voice going to last?" And again, "How can we help to lengthen this span of vocal life?" To begin with we

\* Address before N. Y. Singing Teachers at the Hotel Martinique, April 28, 1915.

must consider each individual separately for his problem may be quite different from that of his associate or friend. Any voice which is going to amount to anything must be built up on a solid mental and physical basis. A beautiful tone quality is of little ultimate value if there are no brains to top it off with. Or given both of these in good measure one can expect little if the physical organism, the general health is vitally deficient. *Mens sana in corpore sano* is just as true of the singer as of any other person. In many respects it is of the utmost significance. To excel in song requires more natural talent, more careful adjustment of essentials than in any other art with which I am acquainted. Seriousness of purpose and hard work while important are far less so than talent or intelligence and physical fitness. We cannot create talent or intelligence but we can correct many physical defects and can mould thought processes. First of all the body as a whole must be made an efficient instrument of the will. The physical organism must be put right. It is disappointing in the extreme to see the pupil struggle along for two or three years under the burden of nasal insufficiency, obstructive adenoids, or chronic disease of the tonsils and then become suddenly aware of the reason for lack of progress. All this for want of a thorough and careful physical examination at the outset. Every beginner should in my opinion undergo the same examination as if he were a candidate for a policy of life insurance. Every known method of determining his ability and capacity should be utilized. The general physical equipment should be investigated and where defective should be put in the best possible condition. The size, weight, strength, endurance, condition of muscles, nerves, digestion, etc. should be set down and any improvement noted at a later date for purpose of comparison.

The pupil is the clay with which we work. His impressions are easily moulded in the beginning and can be changed later on only with the greatest difficulty. His reliance upon teacher and physician is or ought to be absolute. Good advice will make him; bad advice will mar him and the career which is a part of him forever. He should not be told too much about anatomy and physiology, or of the movements of the jaw, tongue, lips, etc.—we must beware of the *idée fixe* teachers and voice specialists alike!

Every teacher and physician should know a great deal more than he is obliged to use in his daily work. The fountain of knowledge should be so inexhaustible that no pupil or patient can pump him dry. This applies of course to those things which are known of a certainty, not to the merely speculative and quixotic. There must be an increasing desire to explore the unknown, and to push back the veil of ignorance a little further, so that the physical horizon of the chosen field shall become a vanishing quantity. It is true that all roads lead to Rome, but there is certainly one which is wider, smoother, shorter and shadier than all the others. It is this which vocalists as a whole are seeking in the efforts now making for "standardization." Whether it can be done or not is an undecided question, but there is no harm in striving after it. Nothing but good can come out of discussions of the subject even if such discussions are sometimes attended with more heat than light. The light is needed to be sure, but the heat is a purifier and a refiner of ideas. There must be, after all, certain guiding principles, which are the basis of all successful vocal results, the differences are those of degree only and not of the fundamental fact.

Although the legitimate fields of laryngologist and vocal teacher are distinct and separate, they have so much in common that co-operation should prove of great

advantage in the training of singers. *Before a pupil begins active work he should be thoroughly tried out and examined by a laryngologist who knows something of the singing problem.* The nose, throat and ears should be tested by every known method, and a definite idea should be obtained also of the general bodily health. It is helpful to know the range and compass of the voice, and to determine any serious faults of tone production which are not due to purely physical causes. For this one may try out a voice at the piano and make careful notes of what is found, then at a later date this can be done again for purpose of comparison. Any recommendation as to vocal exercises should be communicated to the teacher direct and not to the pupil, since it is the teacher who is immediately responsible for vocal growth and progress. The laryngologist should avoid falling into the error of always finding some physical cause for every disturbance of which the singer complains. Very often such symptoms are the result of something the singer does in practice at home which is not found out at once by the teacher. There are, too, some cases which do not develop satisfactorily where neither the teacher nor the physician can find any discoverable cause for the defect. Secretory changes in the mucous membrane are of especial importance and are frequently overlooked. There may be an abundant sticky secretion which dries and forms crusts in the nose, or the mucous membrane may be very dry from glandular inactivity—a condition which interferes greatly with the singer's finer work, especially the soft tones.

It is not my purpose to go into these matters exhaustively, but merely to point out a common ground upon which the rhinologist and vocal teacher can think, act and work together for the furtherance of perfection in the science and art of song.

14 Central Park West.

### NON GONORRHEAL INTRAURETHRAL LESIONS.

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The urethra, owing to its delicate lining, may be subject to diseases other than gonococcal infections, and if one is not careful may confound it with such, particularly, if the symptoms resemble those of gonorrhea. Thus one is apt to find chancres, chancroids, granulomata, tuberculosis, and polypi; the latter depending or not on a previous attack of gonorrhea. The symptoms depend on the nature and location of the lesion. Inflammation of various grades invariably associates itself with endourethral lesions, and hence will give rise to symptoms that are characteristic of inflammation in general and the urethra in particular.

**Chancres:** By far the most common disease I have found in the urethra, outside of Neisserian infection, was the initial lesion of syphilis. The symptoms may be so insignificant as to delude the patient into the belief that there is nothing wrong with him. The most frequent location is the meatus urinarius; next in frequency is the navicular fossa, from one-half to three-quarters of an inch from the meatus, either on the roof or the floor.

**Symptoms:** There may be very little non-purulent, mucoid, serous, or sanguineous discharge, depending whether or not there is an ulcerated surface, unless asso-



ciated with a gonococcal infection. Pain is not a prominent symptom unless accompanied by a mixed infection. The symptoms may disappear in a few days with or without treatment, and the patient considers himself cured. This condition represents a large class of syphilitics who deny having had a chancre, and peculiarly enough this is one of the few endourethral affections that will disappear spontaneously without any treatment whatever.

**Diagnosis:** The diagnosis depends on the prolonged incubation period, relative mildness of symptoms, examination of the discharge for gonococci and spirochetæ pallida, induration of the lesion which can often be felt through the urethra, inguinal adenitis, and occasionally a lymphangitis at the base of the penis.

Then there may be a simultaneous infection of gonorrhea and syphilis, as the following case illustrates:

J. K., 20 years old, presented himself for treatment of gonorrhea. The examination revealed gonococci, a subpreputial edema with a suspicious infiltration of the meatus. The edema and induration disappeared spontaneously, without any ulceration in the navicular fossa. At the end of six weeks he was cured of gonorrhea but instead, all the symptoms of lues appeared.

At other times a patient may present himself for treatment for an ailment quite different from the primary cause of his disease. This case is illustrative:

A. P., 26, had an enlargement in the groin that he thought was a hernia. I found an induration and a gluing of the lips of the meatus, and the characteristic inguinal adenitis. The various tests confirmed my diagnosis. I can cite quite a number of similar cases that have occurred in my practice.

B. G., 30, had a little serous discharge devoid of gonococci; incubation period a little over three weeks. The discharge stopped in three days, but instead a few drops of blood appeared. There was no sign of an inflammation at the meatus, so I felt justified in endoscopic him, and found on the roof of the navicular fossa about three-quarters of an inch from the meatus a clean ulcerating surface; this proved, on further examination and careful study, to be an initial lesion.

It may be laid down as a general rule that all aseptic urethral discharges after a long incubation period should be looked upon with suspicion, provided stricture, prostatitis, seminal vesiculitis, and chemical urethritis can be ruled out.

**Treatment:** Once the diagnosis is made treatment is simple. Locally nothing need be done, except to keep the parts clean, for the lesion very often disappears without any treatment. It goes without saying that constitutional treatment should be instituted at once.

**Chancroids:** If they occur at all in the urethra, and there is no reason why they should not, they are extremely rare. They are more frequent at the meatus. When they occur at the meatus they may spread to the glans penis and present the same characteristics as a chancre elsewhere.

M. S., 28, came to me June 9, 1914, with this history: Five days after coitus he noticed a discharge which was followed by a swelling about two inches behind the meatus. The discharge was very copious and thick; micturition was very painful. The left inguinal glands were swollen and very tender. Repeated examinations of the discharge failed to reveal either gonococci, spirocheta pallida, Dueréy bacilli, or any other kinds of organisms. A few days later blood began to appear at the meatus, and since there was no inflammatory process at the meatus, I determined to explore the urethra. Urethroscopy showed an inch and

one-half behind the meatus two sloughing ulcers, one on the roof, and one on the floor just opposite the first; the edges were raised above the surface with papillary growths. To my surprise it yielded readily to cauterization of the ulcers with 50 per cent. silver nitrate solution and irrigations of the urethra with 1-1000 copper sulphate solution; injection at his home with the same solution twice a day and once a day iodoform emulsion, 1 per cent., left in situ. The exuberant granulations at the edges of the ulcers I destroyed by means of the high frequency current through the endoscope. He responded to treatment immediately; the adenitis and the local symptoms in the urethra began to subside. At the end of two weeks he was perfectly cured. This undoubtedly was a chancroid, even though the characteristic Dueréy bacilli were not demonstrable. The subsequent observation of the case confirmed my diagnosis.

**Tuberculosis:** In view of the relative frequency of tuberculosis attacking the prostate, seminal vesicles and epididymis one would suppose that tuberculosis of the urethra should be more common, and I believe that it truly is so, but it either is not looked for or in the majority of cases is not recognized. It generally starts in the prostatic urethra in the terminal stages of tuberculosis of the genito-urinary tract.

I have seen one undoubted case of tuberculosis of the prostatic urethra in the terminal stages of tuberculosis of the kidneys, bladder, prostate, vesicles and epididymis. The urethroscopic picture of the posterior urethra was that of little cystic, pearly masses on the verumontanum and the prostatic sinuses.

I saw another case on the autopsy table. The prostate was tuberculous both macroscopically and microscopically. The posterior urethra was studded with fine pearly shining tubercles that looked cystic to the naked eye, and on microscopic section proved to be typical tubercles.

The lesson to be learned from such cases is that in the event a patient presents himself for treatment with urinary symptoms, without history of any venereal diseases, the discovery of such lesions in the urethra should cause the physician to bear in mind a possible tuberculous infection.

**Polypi:** Polypi may be found in all parts of the urethra. They may be the result of gonorrhea in long standing suppurating conditions of the urethra and adenæ, as in suppurations of the accessory sinuses of the nose. Again they may form spontaneously as in other regions of the body. There may be no symptoms, the lesion being discovered accidentally, or there may be an uneven, bifurcated stream, depending on the location of the growth. There may be symptoms of an associated urethritis, hence discharge will be one of the most constant symptoms; at times there may be bleeding. When the polyp is in the posterior urethra there may be signs of a posterior urethritis with urgent and frequent micturition, itching of the urethra and dribbling. The latter two symptoms may be present with a polyp in any part of the urethra.

The diagnosis can be made only by an urethroscopic examination, preferably using an air distending urethroscope. They are seen as tumor masses projecting into the lumen of the urethra, and as a rule are pedunculated, or slightly raised above the surface. There may be some in the process of development as small circumscribed shiny, translucent, glistening areas somewhat raised above the surface, not unlike little cysts. These shiny surfaces represent merely small columns of epithelial cells which begin to push the mucosa before

them. Cauliflower excrescences in the urethra are rare; they are more common in the bladder.

The treatment is removal by either the curette and cauterizing the base with 50 per cent. silver nitrate solution, or better still, fulguration with the high frequency current. The embryo polypi are best touched up with a penetrating caustic such as 10 per cent. acid nitrate of mercury solution.

**Cysts:** Cysts are quite common in the urethra. They are of two varieties, a rare one of the developmental type, which is the same as a cyst elsewhere; and the retention cyst, which is by far the most common. The latter occurs in many cases of chronic gonorrhea, where Littre's glands are infected and whose secretions clog up the common duct and some of the accessory ducts. The result is distention of the alveoli of the glands with inflammatory products; coincident with the distention there is a thinning out of the mucosa which eventually, under the great pressure, ruptures and discharges the contents of the cysts. This, when allowed to go on, will constantly repeat itself unless relieved by appropriate measures. This explains many of the so-called relapsing gonorrheas. A similar process takes place in cystic cystitis; which is occasionally associated with oxaluria and intermittent pyuria.

The symptoms of a developmental cyst depend on the size of the growth, hence to the extent it encroaches upon the lumen of the canal, and the symptoms will be largely obstructive.

A young Italian presented himself for treatment with a swelling at the peno-scrotal junction of the urethra impeding his flow of urine. That tumor, the size of a pea, was there for years. Suddenly it took kindly to growth, reaching the size of a small walnut. Two weeks later he informed me that it ruptured spontaneously, discharging a considerable quantity of cheesy material. The endoscopic picture before its rupture showed a large cystic mass richly supplied with markedly distended blood vessels.

The symptoms of retention cysts, since they never attain a sufficiently large size to cause obstruction, will be more of a chronic relapsing discharge and some burning micturition.

Diagnosis is simple when seen through the endoscope in connection with the history of the case. As I pointed out, it must not be confounded with newly forming polypi nor with tuberculosis.

The cysts of the developmental type should be removed by open external dissection before they rupture. The smaller cysts of gonorrheal origin should be destroyed by extreme dilatation with Kollmann's dilator; if, however, they recur, as they often do, they should be incised through the endoscope and the base destroyed either by chemicals or the high frequency current.

**False passages and diverticula:** False passages are very often caused by the rough use of instruments in attempting to pass an impervious stricture or a projecting median bar of the prostate. In the former the lesion is commonly found on the roof, while in the latter on the floor of the prostatic urethra through the protruding lobe of the prostate.

Symptoms of a recent injury will be pain, more or less bleeding, according to the degree of injury and relative immobility of the instrument in the urethra. In healed lesions arrest of the instrument in one of the pockets may be the only indication of the existence of a false passage. The treatment depends on the severity of the injury. If slight, rest in bed and abstinence from urethral instrumentation is in order until the damage is sufficiently healed to admit of intraurethral treat-

ment, provided, there are no urgent calls for immediate interference to relieve an acute retention of urine. But even then it is best to keep out of the urethra and try other methods of relieving the retention as by suprapubic aspiration. If, however, the injury is too extensive to admit of delay, as evidenced by severe uncontrollable hemorrhage, and collapse, suitable surgical measures must be undertaken that will both relieve the obstruction caused by a stricture, and check the hemorrhage. If the bleeding is internal, due to injury of the prostate, only such surgical measures should be undertaken as can be done with expediency, to check the alarming hemorrhage. More radical treatment should be deferred to a time when the patient is better able to withstand the additional shock of an operation. Many false passages in the anterior urethra heal completely, while others form a gap in the process of repair leaving a pocket between the mucosa and the submucous tissue. This gives rise to no symptoms and requires no special treatment, being discovered accidentally either when passing a sound or endoscopic the urethra. The bridge of scar tissue may be snipped with scissors and the tabs destroyed by the galvano-cautery.

Diverticula may be either acquired or congenital. The acquired is due to an impervious stricture. With the gradual closing of the lumen of the urethra at the site of stricture, there is a corresponding dilatation behind the stricture. In the course of time the urethra cannot completely empty itself, there always remain a few drops of urine in this newly formed sacculum with a resulting inflammation. This explains the gleet discharge and dribbling occurring in strictures. When the process continues the infiltration spreads, cutting off nutrition of the tissues and eventually ulceration results, hence the associated hematuria in some cases of stricture. This may be one of the first signs that make the patient seek relief. If the obstruction is not relieved another complication may set in, namely, that of stone formation from the deposition of urinary salts in the pouch behind the stricture. When the process is allowed to go on unabated, infection supervenes, and periurethral abscesses with urinary fistulae are formed.

Congenital diverticulae are less common. I have seen two cases, both in the bulbous urethra. They are of no clinical significance unless associated with congenital strictures; occasionally, however, they may retard the cure of gonorrhea. The only symptom they may produce when uncomplicated, is dribbling. I discovered the diverticulae in both instances by accident when treating them for Neisserian infection. The treatment of acquired diverticulae is that of the associated condition, while that of congenital is that of dissecting out the sac, and if accompanied by a stricture, of cutting the stricture.

63 Second Avenue.

When a stone is impacted in the lower two inches of the ureter, it may be felt by a finger introduced into the rectum in the male, or the vagina in the female, the fingers of the other hand making counter pressure above the pubes. A stone traveling from the kidney to the bladder may be arrested in any part of the ureter, but the positions in which it is most likely to get impacted are: at a point two inches from the upper end of the ureter; at the brim of the pelvis; and at the vesical end of the canal.

Nasal polypi are generally multiple, appearing as gelatinous, grey, semi-transparent, oyster-like freely movable masses.

## MODERN METHODS IN THE DIAGNOSIS OF SYPHILIS.\*

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In our various talks here on Thursday afternoons we have paid more or less attention to the clinical diagnosis of syphilis, but it has been in a rather casual, desultory sort of way. When I have had interesting cases in the ward I have brought them in and presented them before you, but we have not discussed the subject in a systematic fashion. Today I want to spend an hour in discussing the modern methods of making the diagnosis of syphilis in a formal and didactic manner.

We depend at the present time a great deal on laboratory methods for making a diagnosis of syphilis and we also depend to a considerable extent on the clinical symptoms when they are present. Where the clinical symptoms are distinct, to an experienced man, they are very often quite sufficient for a positive and complete diagnosis. Very often the clinical symptoms fail entirely or they are so obscure that they leave one in doubt as to the condition present and those are the particular cases where we must resort to the laboratory methods of diagnosis.

Under the head of laboratory methods we have four ways of making an examination for the purpose of making a diagnosis of syphilis:

First. The demonstration of the spirocheta pallida in the suspected lesion.

Second. The Wassermann reaction of the blood.

Third. The cutaneous or Luetin reaction of Noguchi.

Fourth. The findings in the spinal fluid.

Those are all methods which require a high degree of technical skill, of pathological training, and a long experience in laboratories to make them accurately; and unless they are made correctly it is better that they be not made at all.

We find, where it is possible, that the clinical experience and laboratory methods supplement each other. Very often the laboratory methods are not available, as for instance in the case of a man practising in the country away from the centers where there are hospitals or laboratories, or a physician on a vessel or a surgeon who, at the present time, is with the armies in France, or Belgium, or East Prussia, and laboratory methods are not at hand and not available—in such cases a man has to depend entirely on his clinical experience.

Then, there is another thing. There are a great many laboratories scattered throughout the country and some of them are managed by people who are not competent, who do not understand their work and who do not know how to make these laboratory tests; they try to make them and get wrong results; so that for various reasons, one must often depend on clinical symptoms.

One of the results of the advances in laboratory methods in the diagnosis of syphilis has changed our view as to the time when it is proper to begin the treatment of syphilis. Formerly we waited for the eruption to appear before beginning anti-syphilitic treatment, but now, as soon as the spirochetæ are demonstrated, we begin treatment with salvarsan because we know that in a certain number of cases, if we begin treatment early enough, it is possible to abort the disease by an

intensive course of salvarsan and mercury. For that reason it is very essential that we make a diagnosis at the earliest possible moment with the idea of beginning treatment just as soon as the spirochetæ are demonstrated.

There are various methods of demonstrating the spirocheta, but the dark field illumination is regarded by every one as being the best, simplest, most practical, and quickest.

There are also the stains, such as the India ink stain, or Method of Burri, in which the spirochetæ are seen moving and shining through the dark field made by the India ink. The true stains, such as the Giemsa and Levaditi, are chiefly used in tissues and are not as applicable or as practicable to the finding of the living organism.

Speaking of the spirocheta, there is rather a new point which has been spoken of recently. The disease will attack the nervous system in some cases, whereas in others the spirochetæ will attack the skin and in still other the bones or viscera. Somebody has made the suggestion that the spirochetæ have different strains and that certain strains have greater invasive power than others and these certain forms or strains of spirochetæ have a tendency to attack the nervous system, so if a man happens to be inoculated with the particular strain that has this invasive property, his nervous system will be attacked, whereas if he is inoculated with the other strains he gets off with a light invasion of the skin and arteries. It has not been worked out as yet, but it is a suggestion which may have a good deal in it.

In making a diagnosis of syphilis, therefore, we use the dark field illumination as soon as a man comes in with a sore. If it is a chancre we collect the irritation serum and put it under the dark field and if we find the spirochetæ our diagnosis is established and we start treatment. If the spirochetæ is not found after several examinations we have to depend on the clinical symptoms.

The initial sore is very often atypical. You will remember how very few of my cases have been typical examples of what we call true initial sclerosis. Sometimes the chancre has no induration; there is just the slightest amount of induration; and yet the books say they must have a hard base. Mixed sores where we have to deal with chancroidal and spirochetal invasion at the same time are very puzzling. Urethral chancres are extremely misleading. A man has a discharge; he thinks it is a clap and when we come to feel an inch a half inch within the urethra we find a mass of sclerosis and the man, after a while, develops the secondary rash and we find that instead of having a simple case of gonorrhea, he had a chancre within the urethra. Hard edema, that is indurative sclerotic edema, also casts doubt on our diagnosis. Then, once in a while, we meet with a case of syphilis in which there has been no local lesion. They are very puzzling, but we have now come to the opinion that the spirochetæ can enter directly into the lymphatic system through some very small point of inoculation. We know that it is possible to puncture the skin and carry the spirochetæ directly into the lymphatic channels and they will be carried through the lymphatics and ultimately to the blood-stream. There is no reaction at the point of entrance and the man has a syphilis without developing a chancre; so the dictum that every case of syphilis has its starting point in a chancre must be modified. That the spirochetæ can be injected directly into the lymphatics has been shown to occur as, for instance, in

\* Clinical lecture at Long Island College Hospital.



the case of surgeons pricking themselves with a needle. Insect bites have also been supposed to be responsible for the development of syphilis in certain cases and one can easily see how a louse biting a syphilitic individual can carry the spirochetæ by his tentacles to some man free from syphilis and biting him, inoculate him with the spirochetæ. The man may develop a chancre at the point of invasion, or perhaps the spirochetæ are carried directly into the lymphatics. Since the introduction of the Wassermann reaction a number of cases have been found of men who have a positive Wassermann and yet they have denied all appearance of a chancre previously. We had no explanation for these cases except the general untruthfulness of all venereal patients, but this opens up the possibility that those people may really have been doing their best to give us all the information that they could.

These views are, of course, very vague at the present time, but in five or ten years it is possible we may have more definite knowledge.

In considering the Wassermann reaction I wish to reiterate my statement regarding the many unreliable fly-by-night laboratories. They make Wassermans for a small fee but their reports cannot be depended upon. We should insist emphatically on nothing but positively reliable reports.

Now a few words as to the Wassermann reaction and its interpretation. The old original Wassermann is the only reliable one to use. There are various short cuts which have been devised and fancy stunts introduced, but they are not reliable and have been dropped. The Wassermann does not appear simultaneously with the infection, but usually in from six to eight weeks. Sometimes it comes earlier, but the time mentioned is the average, just when the blood begins to get saturated with the spirochetæ and its toxins.

In secondary syphilis the Wassermann reaction is 100 per cent. positive in untreated cases; that is to say, every case responds. Occasionally the Wassermann reaction becomes attenuated in untreated cases so that as years go by the disease dies out of itself, but that fortunate occurrence is very rare.

The latent cases, in spite of active and persistent treatment, often remain a strong positive. In explanation it is supposed there is a fast or permanent fixation which we are unable to influence by treatment. However, if a reduction of the strength of the Wassermann occurs, it shows the patient needs additional treatment. For instance, suppose we have a patient with a four- or three-plus Wassermann in an old latent case or a tertiary case. We treat the man intensively and if, after a lot of treatment, he still shows a three-plus Wassermann give him another course of intensive treatment and he still shows a three-plus Wassermann. Those are the cases in which we can disregard the Wassermann and conclude that there is some peculiarity about the man and that he has a fast Wassermann which we cannot influence by treatment. Those are the cases in which we can disregard the Wassermann and consider the man as cured; as you know, the Law says, "A man is considered innocent until he is proven guilty;" so those are the cases in which we can consider a man innocent of having syphilis until we find that he is not cured.

Suppose we get a man with a four-plus Wassermann and by treatment we are able to get it down to a three- or two-plus and then to one-plus, those are the cases where we ought to continue treatment until we are able to make the Wassermann permanently negative.

I should like to say a word about a diagnostic pro-

cedure which we find very useful in certain cases where the Wassermann is either negative or weakly positive, but where we still suspect the presence of syphilis and that is the case called provocative injection of salvarsan.

It has been found that while a positive Wassermann can be rendered negative by sufficient treatment through the destruction of the spirochetæ, a weak positive reaction may be reactivated by giving a small dose of salvarsan if syphilis is actually present. If there is no syphilis the reaction will not be influenced.

This has now become a routine diagnostic measure in doubtful cases and is applied as follows:

0.3 gram. salvarsan is injected intravenously and the blood is examined on succeeding days.

In syphilitic cases where the blood was formerly negative or weak positive the reaction is changed to a strong positive generally in 24 hours.

If not syphilitic of course the reaction remains negative.

We will now take up the luetin reaction, devised by Noguchi in 1911. He made different cultures from different strains of spirochetæ, heated them for an hour at 60 degrees centigrade and added 5 per cent. of trikresol. This made a suspension, the spirochetæ were killed and the anti-bodies and properties which they produced were contained in the suspension. Of this suspension from .03 to .05 c.c. were injected hypodermically in the arm. If the patient were syphilitic a positive reaction appeared in from four to five days.

Noguchi described three types of positive reaction. A positive reaction appears as a papule or pustule. If the patient were not syphilitic the reaction would be negative and a small erythematous area would appear which lasting for a period of two days and then fade away; so that if no papule or pustule appears the patient is regarded as not being syphilitic.

Noguchi found that a positive reaction did not occur in the primary stage of syphilis and in secondary syphilis it would only occur when treatment were given. It was found to be more frequent in the latent and tertiary periods.

In experiments conducted by Captains H. J. Nichols and C. F. Craig of the United States Army, they found in secondary syphilis a positive Wassermann reaction in 23 per cent. of cases and a positive luetin reaction in 38 per cent.; in latent syphilis a positive Wassermann reaction in 25 per cent. of cases and a positive luetin reaction in 87 per cent.

Another means of diagnosis is by lumbar puncture. This is safe and simple when undertaken with certain precautions. The patient should be kept in bed for twenty-four hours after the puncture in order to avoid nausea, vomiting, headache and dizziness. In the presence of cerebral tumor great caution should be exercised in making a lumbar puncture because cases of sudden death have occurred from withdrawal of the fluid.

In the examination of the spinal fluid there are four things to be looked for: we first estimate the intraspinal pressure; next we examine the fluid for a cell count; then we make a globulin test; and finally, we determine the Wassermann reaction.

In order to make this talk more instructive we are going to demonstrate the technique of making a lumbar puncture so that you can see just exactly how it is done. The patient is now before you and you notice his position. He is sitting up and his back is bent in the shape of a bow. I generally tap sitting up, but some prefer the recumbent position. In order to get the proper

point for the puncture we take a line extending across the spine just above the crests of the ilia on each side. About one inch above that is the best place to tap the spine because you then avoid the spinal chord. A little ethyl chloride is sprayed on the skin to anesthetize it.

I now thrust my needle between the spinous processes of the vertebrae into the spinal canal. I feel now that I have entered the canal by the sudden giving of the tissues in front of my needle and I verify it by withdrawing the stylet and note the escape through the needle of the spinal fluid.

We first take the intraspinal pressure by noting the rise of the spinal fluid in the glass tube attached to the apparatus. The pressure has no particular diagnostic value except that it is increased under certain conditions, like brain tumors and hydrocephalus. Notice the spinal fluid running out into the glass. It is a clear alkaline fluid.

When we come to treat cases of spinal syphilis with the salvarsanized serum we withdraw 30 c.c. of fluid in this way and replace it by a similar quantity of the patient's serum drawn previously and prepared. Next we make a cell count and a globulin test and then do the Wassermann.

To interpret these findings, first let us take up the cell count:

From none to 5 cells (white blood cells) is normal; from 6 to 10 cells is a borderland case; and over 10 cells is pathological. An increase in the number of cells denotes a syphilis of the brain or cord.

The globulin test is also spoken of as phase one of the reaction of Nonne. The presence of globulin only occurs where there is organic nervous disease. We do not get it in normal spinal fluid. It is useful in differentiating between functional and central nervous disease. It is estimated that globulin is present in from 80 to 100 per cent. of all cases of nervous disease caused by syphilis.

Now as to the Wassermann reaction in the spinal fluid. In diseases of the nervous system, especially of long standing, the Wassermann is not always positive in the blood. It should be theoretically, but it is not, and even after a provocative injection of salvarsan we sometimes fail to get a positive Wassermann in the blood. In general paresis it is positive in the blood in nearly 100 per cent. of cases, whereas in tabes it is positive in from 60 to 70 per cent., although we know that tabes is just as much a disease of syphilitic origin as is general paresis.

In the spinal fluid we find the Wassermann positive in 100 per cent. in general paresis and in cases of active tabes it is positive in the same proportion. In other words, all tabetic cases are positive.

After a while, after the active inflammatory process has subsided, there is nothing but a purely degenerative change, and the Wassermann reaction is no longer positive in the spinal fluid in these sluggish, degenerative cases.

We ought to make it a rule to do a lumbar puncture on all patients with symptoms pointing to involvement of the central nervous system and also in latent cases for the purpose of determining if there is a latent process in the cerebro-spinal system.

The puncture is of value as a point in the differential diagnosis between different nervous diseases and also as an index of the activity of the syphilitic process and, furthermore, as a control as to the effects of treatment.

32 Schermerhorn St.

## THE ORGANIZATION OF NATIONAL AND LOCAL FORCES IN THE CAMPAIGN AGAINST CANCER.

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The American Society for the Control of Cancer has recently urged that every State medical society take an active part in arranging meetings and in spreading among all members of the profession the latest knowledge of malignant diseases. The society sets up no claim of priority or originality in preaching to the public the necessity of early recognition and treatment of this disease. The organization was effected under the inspiration of numerous similar movements in this country and in Europe. From the first it has been inspired only by a sincere ambition to co-ordinate all existing forces into a single irresistible nation-wide effort to reduce the cancer death rate by imparting the necessary knowledge and inspiring the will to believe and act upon it. Those who direct the policy of the society have no illusions that they are "called" above others to this task. They firmly believe that all sincere workers should unite in a single well considered national movement. If the present society fails to meet the requirements of such a movement it must give place to some agency that will do so, leading the campaign against malignant diseases with as conspicuous ability and success as the National Association for the Study and Prevention of Tuberculosis has directed the war on consumption.

### Relation to the Professional Societies.

While the Cancer Society found its first impulse in the work of a committee of the American Gynecological Society, the movement was broadened at its very inception by the appointment of organizing delegates from the American Surgical Association, the American Dermatological Association, the Association of Pathologists and Bacteriologists, and practically all the similar special organizations which met in Washington in May, 1913, as the Congress of American Physicians and Surgeons. Definitely launched in New York on May 22, 1913, the movement received within a few months the official endorsement of the American Medical Association, the Clinical Congress of Surgeons, the Western and the Southern Surgical and Gynecological Societies and a number of sectional and State organizations. All these professional bodies have endorsed the design of the National Cancer Society as expressed in its constitution:

"To disseminate knowledge concerning the symptoms, diagnosis, treatment and prevention of cancer, to investigate the conditions under which cancer is found and to compile statistics in regard thereto."

### Relation to Cancer Research.

The Society does not contemplate the prosecution or support of biological research, already so ably pursued under the auspices of our leading universities. With these workers in the field of pure science mutually helpful relations have developed. Indeed a notable collective expression of their attitude is regarded as a very cornerstone of the educational movement. A few years ago the eminent laboratory students placed on record in the transactions of their official organization, the American Association for Cancer Research, their conviction that pending the discovery of the ultimate nature and cause of cancer, a far more effective dissemination

and utilization of the vast store of present knowledge of the disease is urgently called for. Formed to carry out this very object the "Control" Society depends upon the constant support and co-operation of the institutions represented in the "Research" Society. Many of the foremost American students of cancer are prominent in the membership of both organizations. Machinery is thus provided for the wider dissemination among the profession and the people of the essence of the newest knowledge of malignant disease, fresh from its laboratory sources.

#### Relation to Statistical Investigations.

The society does, however, contemplate original work in the collection and collation of statistical data, and will expand this feature of its program as fast as its resources permit. The statistics of cancer mortality need to be improved both as regards their collection and their publication. The merest suggestion by the Society to the U. S. Census Bureau has been sufficient to initiate a notable advance in this respect. With the greatest interest the Director of the Census has undertaken the preparation of a special report on the cancer mortality of the U. S. Registration Area in 1914. The Census Bureau will also for the first time in this study make a distinction between returns based on certain and on doubtful diagnosis. To secure the additional information needed for this distinction the bureau is sending tens of thousands of letters to physicians who have certified deaths from cancer asking whether the diagnosis was based on clinical findings alone or was established by surgical intervention, microscopical examination or autopsy.

All this it will be realized is a large amount of work for even a government bureau to undertake. Much of it should be done in the first place by the registration offices and the boards of health of the several States, where the original certificates of death are filed. It will be the duty of the American Society for the Control of Cancer to urge upon the various State officials the need of undertaking this work in order to insure the permanence of the advance in the statistical study of cancer which has been inaugurated by the Census Bureau.

But the society is also interested in special statistical studies of the geographical, racial and occupational distribution of cancer, and above all in collating, upon a uniform plan, the records of surgical treatment of the disease in the leading hospitals. It is important that an authoritative answer be available for all who ask just what percentage of success is to be expected in the treatment of each phase and each stage of this multi-form disease.

#### Relation to Educational Agencies.

The important and clearly established lessons derived from such studies of the sources of information must be given to the public. The society has undertaken to do this directly, through its publications, its regular articles for the newspapers and its lectures. But in the large view it can best secure this object by enlisting the co-operation of all appropriate existing agencies which conduct educational work. Foremost among these are the State and local departments of health, especially those which are devoting an increasing share of their energies to the spreading of the gospel of health by bulletins, exhibits and lectures. In the same category must be included the committees on public instruction which in many States are conducting admirable campaigns of health education under the auspices of the State medical societies. Toward all these agencies the

society stands in the relation of the "producing" to the "distributing" end of a manufacturing business. With its wide outlook over the national field it is in a strong position to provide statistical material, to receive and pass on new knowledge, new experiences, new methods which have been found valuable in one field and should be used in others. In another view the society may take the position of "middleman" between the research workers and statistical students producing new facts about cancer at the sources of knowledge on the one hand, and on the other the many agencies, general and local, which will bring the practical bearings of this knowledge, new and old, directly home to the people.

#### Relation to State Committees.

The relation of the national society to similar movements within the various States should be clear from what has been said. In no case will the society seek to set up local agencies to parallel work already adequately organized under the auspices of State medical societies and boards of health. Provision is made for local committees to be organized under the supervision of the resident directors of the National Society wherever no State or local agency is in a position to undertake the work. Such groups will not be formed, however, except under full agreement with present State agencies. Where, as in Pennsylvania, under Dr. Wainwright, and similarly under the auspices of State medical societies in Maine, Wisconsin, Kansas, Colorado, Louisiana, Texas and many other States, active local committees are at work, every effort will be made to assist these groups in the manner already outlined and so far as the constitutional limits of size permit to secure from their representative delegates to the governing council of the National Society. At least one director from each State will eventually be chosen to act as a local correspondent who will inspire and stimulate work in his own State while at the same time assisting in formulating the general policies of the National Society.

### "ARTICLES OF FAITH" CONCERNING CANCER.\*

#### A Platform Upon Which to Unite in the Campaign of Education.

- (1) That the hereditary and congenital acquirement of cancer are subjects which require much more study before any definite conclusions can be formed concerning them, and that, in the light of our present knowledge, they hold no special element of alarm.
- (2) That the contagiousness or infectiousness of cancer is far from proved, the evidence to support this theory being so incomplete and inconclusive that the public need have no concern regarding it.
- (3) That the communication of cancer from man to man is so rare, if it really occurs at all, that it may be practically disregarded.
- (4) That those members of the public in charge of or in contact with sufferers from cancer with external manifestations, or discharges of any kind, need at most take the same precautionary measures as would be adopted in the care of any ulcer or open septic wound.
- (5) That in the care of patients with cancer there is much less danger to the attendant from any possible acquirement of cancer than there is of septic infection, or blood poisoning from pus organisms.

\* During the four-day Cancer Educational Campaign, held under the auspices of the Vermont Medical Society, June 8-11, 1915, Dr. William Seaman Bainbridge, of New York City, presented the accompanying twenty-one "Articles of Faith" at several sessions. They form the conclusion of a paper entitled "THE CANCER PATIENT'S DILEMMA."—*Vide N. Y. Med. Jour.*, July 3, 1915.



(6) That in cancer, as in all other diseases, attention to diet, exercise and proper hygienic surroundings is of distinct value.

(7) That, notwithstanding the possibility of underlying general factors, cancer may, for all practical purposes, be at present regarded as local in its beginning.

(8) That, when accessible, it may, in its incipency, be removed so perfectly by radical operation that the chances are overwhelmingly in favor of non-recurrence.

(9) That, when once it has advanced beyond the stage of cure, suffering in many cases may be palliated and life prolonged by surgical and other means.

(10) That while other methods of treatment may, in some cases, offer hope for the cancer victim, the evidence is conclusive that surgery, for operable cases, affords the surest present means of cure.

(11) That among the many advances in and additions to cancer treatment, the improvements in and extensions of surgical procedure surpass those in any other line, and fully maintain the pre-eminent position of surgical palliation and cure.

(12) That there is strong reason to believe that the individual risk of cancer can be diminished by the eradication, where such exist, of certain conditions, which have come to be regarded as predisposing factors in its production.

(13) That some occupations, notably working in pitch, tar, paraffin, anilin or soot, and with x-rays, if not safeguarded, are conducive to the production of cancer, presumably on account of the chronic irritation or inflammation caused.

(14) That prominent among these predisposing factors, for which one should be on guard, are: general lowered nutrition; chronic irritation and inflammation; repeated acute trauma; cicatricial tissue, such as lupus and other scars, and burns; benign tumors—warts, moles, nevi (birth-marks), etc.; also that changes occurring in the character of such tumors and tissues, as well as the occurrence of any abnormal discharge from any part of body, especially if blood-stained, are to be regarded as suspicious.

(15) That while there is some evidence that cancer is increasing, such evidence does not justify any present alarm.

(16) That suggestions which are put forward from time to time regarding eugenic, dietetic and other means of limiting cancer, should not be accepted by the public until definitely endorsed by the consensus of expert opinion. Such consensus does not exist today.

(17) That so far as we know there is nothing in the origin of cancer that calls for a feeling of shame or the necessity of concealment.

(18) That it will be promotive of good results if members of the public who are anxious about their health and those who wish to preserve it will, on the one hand, avoid assuming themselves to be sufferers from one or another dreadful disease, but, on the other hand, will submit themselves periodically to the family physician for a general overhauling.

(19) That at all times and under all conditions there is much to be hoped for and nothing to be feared from living a normal and moderate life.

(20) That the finding of any abnormal condition about the body should be taken as an indication for competent professional and not personal attention.

(21) That watchwords for the public until "the day dawns" and the cancer problem is solved, are:—Alertness without apprehension, hope without neglect, early and efficient examination where there is doubt, early and efficient treatment when the doubt has been determined.

## THE CAMP OF INSTRUCTION FOR OFFICERS OF THE MEDICAL RESERVE CORPS, U. S. ARMY.

HAROLD HAYS,

FIRST LIEUTENANT, MEDICAL RESERVE CORPS, UNITED STATES ARMY;  
SECRETARY, NEW YORK STATE DIVISION, MEDICAL  
RESERVE CORPS.

New York.

About two months ago, the War Department extended a general invitation to all officers of the Medical Reserve Corps throughout the country to camp of instruction situated in convenient localities. It was at last recognized that the civilian physicians belonging to this organization, which is an integral part of the army and which is sure to be of inestimable value in time of war, were desirous of learning as much as possible in times of peace, of the duties that would confront them as a military surgeon. It must be remembered that civilian medical practice and military medicine are so entirely different that unless the civilian physician who belongs to the army as a Reserve Corps officer, is trained, he is worse than useless.

Forty-two officers of the Medical Reserve Corps availed themselves of this generous invitation, and went to Camp Tobyhanna, Pa., beautifully situated in the Pocono Mountains, on Sunday, June 27, ready to don their khaki or olive drab uniforms at five-thirty the next morning and begin the earnest study of medicomilitary problems for the following week. Every kind of specialist was present, extending in age from sixty-five to thirty-two. All specialties, however, were neglected for this one week, all ages were leveled, all superiority forgotten, except that of the army men who were there to teach. It was an example worth remembering to see eminent and revered men like Arpad G. Gerster and Joseph C. Bloodgood dissociate themselves from their reputation and "fall in" each morning.

The instruction began at five-thirty in the morning when at the bugle "you can't get him up," the men tumbled out of bed and assembled for setting-up exercises. Most mornings the sun had not shown himself and a drizzling rain added a certain inconvenience many



1. Dispensary of Field Hospital, No. 6.



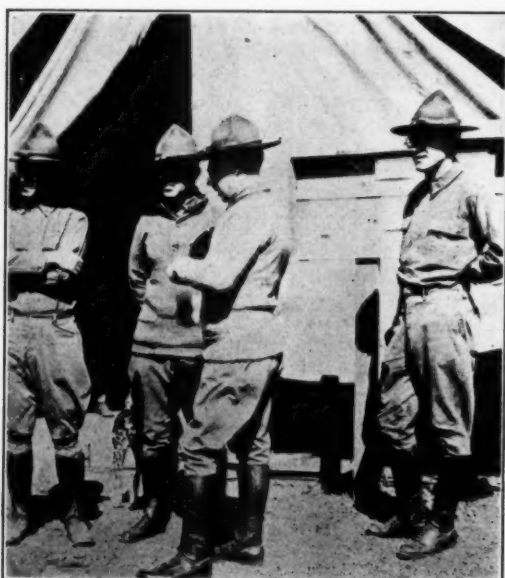
Model Field Hospital of the Medical Corps, United States Army.  
Photograph from Sergeant-Instructor Paul F. Brumm, Hospital Corps, U. S. A.

times—mess call sounded at 6 a. m., after which the routine exercises kept up for twelve hours of the day, frequently supplemented by lectures in the evening.

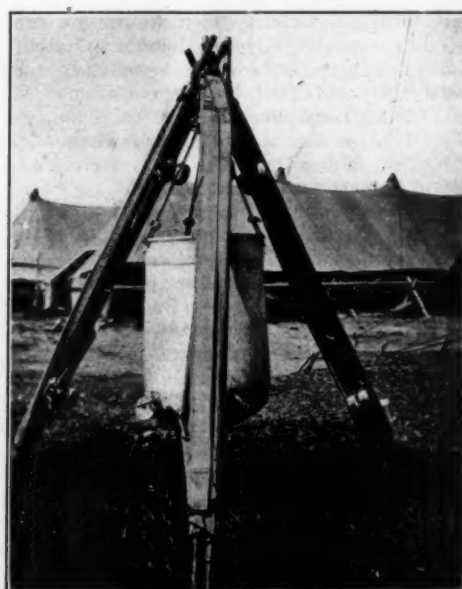
Although it would be instructive to give the whole outlined program, a suggestion of what was done, will give an idea of the many non-medical duties it is necessary for a military surgeon to perform. The first day was spent in learning the equipment of the field hospital and ambulance companies and in impressing upon the men the important fact that in field military work, space is of the utmost importance. For example, all cots for patients in the field hospital have at present been abandoned and the blankets spread upon the ground, pro-

tected by straw or hay and rubber sheeting in order to load the equipment into six or seven wagons instead of eight. The equipment of an ambulance dressing station is loaded upon the backs of four mules. This equipment includes tents, medicines, surgical dressings and invalid foods. One cannot be satisfied with knowing what these animals carry but must know the animal itself, how much food he needs, how much water, what his illnesses mean, etc.—in fact as every officer is mounted, he must know everything about a horse or mule. So the last hour of each day was given over to stables and grooming.

On the second day the student officers were divided



2. Medical officers at Tobyhanna. From left to right: Capt. McMillan, Maj. Page, Maj. Wadhams, Capt. Jones.



3. Bucket for sterilizing water with hypochlorite of calcium. Fifteen gallons are sterilized in 15 minutes.



4. Carrying a patient with fractured thigh through dense underbrush to aid station. Lieuts. R. Slee and Seneca Egbert in foreground.

into two squads, under the direction of a commander to whom all orders were given, to be conveyed to the men under him. One of these sections was under the command of President Reynold Webb Wilcox and the writer took charge of the other. Any other men would have done as well but my purpose in mentioning this, is to show that the men in my section, many of whom were older, some of them my former teachers, most of them men of great reputation, were perfectly willing to submit to military discipline and follow my leadership without a thought. Each squad commander directed his men as to where to go for each exercise. On this second day, practical work began. Lectures were given on the school of the soldier, recruiting, property protection, etc., intermixed with litter drill and sabre drill. An amusing incident happened at this time. Major Henry Page, M. C., who was in charge of the instruction, than whom there is no more intelligent, courteous, soldierly man, thought that some of the men would not like to get out and carry litters. He therefore provided an interesting lecture in one of the mess halls. As the men stood at attention in the drizzling rain, he told them that the litter drill was optional and those that wished to go "in-doors" should step out. Not a man moved. The squads were divided in sections of eight and went through the drill with the litter for a full hour. In my litter squad were Dr. Gerster of New York and Drs. Hart and Egbert of Philadelphia, all of whom will be advanced on the honor list for the work they did that day. It is hard enough for a young man to manage one of these clumsy contrivances but if their proficiency showed anything it proved that youth lasteth unendingly.

"Paper work" is of absolute necessity in any well-organized body and the attention to detail of papers saves a lot of trouble in the long run. One must know how to make out enlistment papers, morning sick reports, monthly and yearly hospital returns, daily ration returns, transfer cards, property papers, requisitions to the quartermaster, military correspondence and so on. Of course a great deal of this work is done by non-commissioned officers but the surgeon is responsible for its correctness. Moreover, the Medical Reserve Corps officer must realize that he will probably be placed with volunteer troops and that his non-commissioned officers being new are not to be trusted.

I cannot exclude my review of the didactic part of the teaching with giving a word of commendation and thanks to that efficient artillery officer, Major M. McClosky, who firmly fixed in our minds the importance

of military surgeons, knowing the different kinds of guns and ammunition used in present-day warfare, the wounds inflicted by scrapnel, by shell, by rifle and pistol bullets vary greatly and one must know these guns to appreciate the kind of injury they inflict. Moreover, the sanitary troops must know the disposition of a column in line of march. The personality of Major McClosky is a fine illustration of what an efficient military officer must be. He is a strict disciplinarian but so much a man that he is loved by all who come in personal contact with him. The most valuable part of his interest in us lay in the fact that it showed that the "line officer" is well appreciating the importance of the Sanitary Corps and not only is willing to teach medical officers all he knows but in turn desires to be instructed by them.

The very way that one caught an idea of what takes place in actual warfare is to simulate actual warfare as far as possible. Realizing this fact, the instructors worked out a "problem" which was carried out on the fifth day. Our army was over at Drinker Heights having come from Scranton. The enemy were on a range of hills across the ice pond near Tobyhanna. The artillery were ordered to cover the infantry and cavalry who were out in the open. The artillery rushed to position and cover, the muzzles of their guns pointing directly at the enemy. A field hospital had been established, the ambulance companies had put up their dressing stations and the regimental aid station was placed in the woods behind the troops. Order was given to "fire" and the enemy responded, wounding many of the men. The Reserve Corps officers were ordered to hunt for wounded and command litter bearers when they would be found. Wounded men were concealed beneath bushes and boulders—anywhere they would drag themselves to shelter. I stumbled over one poor fellow who had a compound fracture of the tibia. We were not allowed to carry anything such as bandages with us, so dressings had to be improvised with the material around us. The leg was uncovered and over the open wound some large clean leaves were placed. Soft moss covered the leg, kept in place by the soldier's legging. Splints were made from boughs of trees and held with the belt taken from the soldier's waist. A drink of water completed the hasty treatment. I called for litter bearers but there were so many dead and wounded that it was an agonizingly long time before one could be had. The poor fellow was placed on a stretcher (he had surreptitiously walked to a more comfortable place with the splint on in the meantime) and taken to the aid station which by that time was packed with wounded. Here was a fractured thigh, there a penetrating wound of the abdomen, here a bullet wound of the



5. Medical Reserve officers preparing fire for cooking their own dinners.



chest, there a slight injury—a man with his scalp over his eye-brow. Finally the station was cleared by litter bearers from the ambulance companies, who took them to the dressing station. From there the more seriously injured were removed by ambulance to the field hospital five miles away (actually a hundred yards). If every officer worked as hard as I did that morning, he needed a shower bath.

We had all been provided with mess kits. At noon our rations were doled out to us—two eggs, a slice of bacon, bread and butter, apple sauce and coffee. We foraged for wood and built fires. Each man cooked his own meal and ate with a relish—except the coffee which must be drunk in a certain way as it isn't strained. One takes a mouthful through his teeth and after each swallow, spits out the grounds. To make matters more realistic a thunder storm came up during mess which made us run to cover like ordinary civilians.

The Camp of Instruction was a great success. All credit is due to Majors Page, Hall, Wadhams and Hess for their unceasing efforts on our behalf. We all hope that as each year goes by we shall be ordered by the War Department to make ourselves more efficient as military surgeons.

The following medical reserve officers were present: Reynold Webb Wilcox, A. G. Gerster, Graeme M. Hammond, Thos. W. Hastings, H. Lyons Hunt, Richard Derby, Harold Hays, W. M. Brickner, M. Stark, E. W. Peet, H. F. Quackenbos, J. Bayard Clark, T. F. Lancer, G. G. Fischlowitz, M. M. Eckert, F. T. Van Buren, all of New York.

H. Sheridan Baketel, W. H. Steers, J. C. Bierwirth, of Brooklyn.

Seneca Egbert, R. H. Harte, J. H. W. Rhein, J. Jopson, G. C. Kieffer, J. B. Klauder, F. H. Hustead, of Philadelphia.

Joseph C. Bloodgood, J. K. Nichols, D. Mac Calman, of Baltimore.

D. Dale, Bellefonte, Pa.; H. L. Quickel, Boyerstown, Pa.; R. Slee, Swiftwater, Pa.; M. J. Synnott, Montclair, N. J.; F. A. Hunt, Pompey, N. Y.; James Ward, Indiana, Pa.; J. M. Wainwright, Scranton, Pa.; A. N. B. Hooe, Washington, D. C.; C. M. Smith, Fredericksburg, Va.; W. M. Phelps, Stanton, Va.; R. W. Andrews, Poughkeepsie, N. Y.; J. C. Breitlung, Lunenburg, Vt.

11 West 81st St.

#### Lichen Planus.

R. L. Sutton, Kansas City, says that the hypertrophic forms of lichen planus are relatively common, but he describes two cases which are different from the usual type. Both occurred in men, and were large, rough, scaly eruptions with some satellite lesions, not resembling the ordinary papules. The patches consisted of closely aggregated groups of large, flat, or oval top scaly papules, hard and resistant to the touch. The peculiar feature, however, was the arrangement of these nodules, many of them being only connected by bridge-like bands of diseased tissue, the skin enclosed being normal in texture. In the first case described the patches were large, and situated on the outer surface of the thighs. In the second case, they were mostly confined to the hands and wrist. The histologic structure was largely that of the usual lichen planus type and with the first there were well preserved coil gland ducts in addition. In both cases marked benefits were obtained by the use of mercury salicylate, administered intramuscularly. Locally a calamine lotion with Duhring's compound tincture of coal tar was used in the daytime, and an ointment containing ammoniated mercury, phenol and menthol at night.—(J. A. M. A.)

#### Department of Hygiene at Long Island.

Dr. H. Sheridan Baketel has been appointed head of the Department of Hygiene and Public Health in Long Island College Hospital in succession to the late Dr. Joseph H. Raymond. The following special lecturers will assist him:

William G. Bissell, M.D., Buffalo, Examiner in Hygiene and Sanitation, New York State Board of Medical Examiners; Major, Medical Corps, N. G. N. Y. (retired)—Military Hygiene.

Charles F. Bolduan, M.D., Director Bureau of Public Health Education, Department of Health, City of New York—Public Health Education.

Dr. L. P. Brown, Director Bureau of Food and Drugs, Department of Health, City of New York—Food and Drug Inspection.

Edwin J. Fort, C.E., M.C.E. (Cornell) Chief Engineer Bureau of Sewers, City of New York—Sewage Disposal.

William H. Guilfooy, B.S., M.D., Registrar of Records, Department of Health, City of New York—Vital Statistics.

William A. Howe, M.D., Albany, Medical Inspector of Schools, University of the State of New York—Medical Inspection of Schools.

Joseph J. O'Connell, A.M., M.D., Health Officer of the Port of New York—Maritime Quarantine.

Almuth C. Vandiver, B.S., LL.B., Late Counsel to the Medical Society of the County of New York—Sanitary and Public Health Law.

Linsly R. Williams, M.D., Albany, Deputy Commissioner of Health, State of New York—Sanitation.

Special lecturers in hospital treatment of contagious diseases and other pertinent subjects will be announced later.

The work in this department will include: Public health administration; education and laws; sanitary law; functions of the health officer; the legal mechanism for the control of disease; general principles of transmissible diseases; diagnosis, control and prevention of infectious diseases; epidemiology; insects and disease; water borne diseases; social diseases; relationship of disease in animals to man; infant mortality; management of epidemics; personal, dental, school, factory, and institutional hygiene; military hygiene; ventilation, plumbing and drainage; climate and soil; soil pollution; vital statistics; medical inspection of schools, factories and institutions; food milk and water supply and inspection; analysis of air, water and milk; sewage, garbage and refuse disposal; isolation and quarantine; disinfection and fumigation; municipal sanitation; sanitary engineering; organization of a sanitary service.

In addition to lectures the students will visit the quarantine station of New York at Rosebank, S. I.; the observation and isolation hospitals at Hoffman and Swinburne Islands in New York Bay; the laboratories and hospitals of the City Department of Health; the immigrant station and hospitals at Ellis Island; a milk pasteurizing plant; a model factory and institution and other public places of practical interest.

The albuminous constituent of the hemoglobin, or oxygen-laden adrenal secretion, is distributed by the red corpuscles to all parts of the body as an oxidizing agent.

Exaggerated anti-peristalsis may be regarded as a sign of serious bowel obstruction, and may be expected in spastic constipation and obstruction from benign or malignant processes. It is a valuable accessory sign in carcinomatous obstruction in the bowel.

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NEW YORK, AUGUST, 1915.

### The Paranoid Highbrow.

We are beginning to take into serious consideration the paranoid agitator of the highbrow type. The recent attempt on the life of J. P. Morgan brings one of the breed directly into the open. This man went to extreme lengths in his fanaticism, but the country is full of gentlemen who, while very cautious themselves about what is known as direct action, nevertheless incite people more weak-minded than themselves to deeds of violence.

Within the ranks of the medical profession we have certain gentry who are doing their utmost to demoralize their brethren. As a rule they are men who would have nothing to lose through the overturning of institutions and methods of service. We tolerate them simply because they are highbrows. What they have to say is couched in the language of culture, and while this protects them analysis will show that their mental processes and ideas are not essentially different from those of the paranoid group of the psychiatrists.

A hearty interest in evil social conditions does not require that a man become a paranoid agitator. Because one recognizes, with Leo XIII, that when "through fear of a worse evil, the workman accepts harder conditions because an employer or contractor will give him no better, he is a victim of fraud and injustice," and that because of industrial conditions of vast and evil character flowing from this kind of fraud and injustice there is a reflex injury done to the medical profession, whose prosperity depends upon the prosperity of the workers, it does not follow that one should immediately set himself to making a salaried, uniformed force of all the physicians in the country.

We should say that the same error obtains in the case of those who would adapt the profession to evil social conditions by socializing it as operates in the case of

those who would meet bad economic conditions by limiting the size of families instead of aiding in the correction of social pathology. In both cases injurious readjustment is advocated as a substitute for decent solutions. In the one case the medical profession is to be put on the plane of letter carriers, in the other women are to be deprived of the joys of motherhood and compelled to order their lives, not by the promptings of the spirit, but by economic rule of thumb.

We should like to say a further word as to what we consider the fundamental cause of our paranoid highbrows' activities. This group is composed of men who have an insatiable ambition for fame. They possess culture, but they utterly lack creative genius. Intellectual plebeians, they are thwarted in their efforts to achieve that which they desperately desire—fame founded upon contributions of great and permanent value. With no possibility whatever of succeeding in the world of creative effort they gravitate into fields in which a sorry substitute for fame partially meets their real desires. They get constantly into the public eye and ear and achieve, not fame, but notoriety. They are the sorriest products of the educational machine of to-day, which in their case instilled strong desire into brains that are impotent, vapid, creatively imbecile.

### An Eminently Wise Proposal.

One of the best suggestions that we have seen relative to what the Constitutional Convention might do for the protection of the people's health was put forth by the *Sun*. It proposed that there be incorporated into the new Constitution a provision against legislative consideration of all amendments to the public health laws which do not have the sanction of the State Board of Health. Since the latter is selected by the Governor as the official agent of the State in all health matters, such action would practically insure the passage or failure of a proposed act, and thus preclude long and costly hearings before legislative committees. The effect of such a provision upon the annual raids of the faddists and freak therapists can easily be imagined. It is a reproach to the medical profession that its prestige in the community is such that it has never been able to bring about such an eminently sane and appropriate system of regulation, and that it may not be able, even now when such a system has been definitely proposed, to induce the members of the Convention to put it into the Constitution and into effect.

### The Mobilization of the Vermin.

The despatches from the seat of war say little or nothing about two great armies that are operating against both Allies and Germans. We refer to the itch insects and lice. It is said that the fiercest onslaughts of these forces have been against the Russians and that the Germans have found their captive Russians a great and expensive nuisance, for it is by lice that typhus is transmitted. We say expensive, for the Germans have had to adopt an extensive system of disinfection involving the construction in the Eastern Theatre of great plants in which the destruction of the pests is effectually accomplished. At the beginning of the war some amusing tales filtered through about the consternation with which clean English gentlemen were seized upon discovering that they were infested and that it was almost impossible to rid themselves of the vermin. We do not know, but we presume that the English have vanquished these foes, or else gotten more accustomed to their occasional inevitable presence.

### Longevity Competitors.

Who live the longer—those who work hard and devote themselves to meeting adequately the hard duties of life, or the parasites, pensioners and dependent relatives?

We are not acquainted with any statistics that would decide this question with any positiveness; therefore we feel privileged to scan the field roughly and express a mere opinion.

Parenthetically, we shall regret the day when all these moot matters are cleared up and fully statisticized. We shall then be at a great loss imaginatively. Then we shall have to content ourselves by attacking the accuracy of the gathered data and the validity of the conclusions drawn from them.

We had almost said that we hoped that a great many matters would never be wholly cleared up. Even in the world of science it is much more interesting not to know than to know. We should think that a scientist knowing almost everything knowable would be as unhappy as one with the gift of prescience.

It is our opinion that the neurasthenic, the parasite, the pensioner and the dependent relative are very expert in achieving longevity. We might better say that it is our observation. At the same time we quite realize that the experience of others may have run counter to ours. Of course, we know that the inmates of our state hospitals present a vastly higher death-rate than do their more fortunate brethren not so immured, owing largely to tuberculosis. But leaving out this class, and also the inmates of institutions caring for the sick who have fallen in life's battles, and confining ourselves to the consideration of the qualified experts in the intensive cultivation of longevity at the expense of relatives or the government, it is our belief that the said experts have their hard-working brethren beaten a mile.

Many neurasthenics reveal consummate artistry in taking care of themselves. They must live long. Still, there are the neurasthenics who do themselves much harm through fool dieting, bathing and exercise, which may balance the death-rate of this class.

The pensioner never dies. The dependent relative survives pneumonia and evades smallpox successfully in the midst of an epidemic. If the dependent relative contracts intestinal cancer and has a few inches of his alimentary tube removed, he does not die, but is cured. Sometimes we suspect that if a close study were made of the seemingly miraculous recoveries that we not infrequently observe, the fortunate patients would be found to be dependent relatives almost invariably.

Now we are not humorists. We profess to be serious scientists, and what we are submitting is our sober thought. We leave the humorous phase of the subject to Simeon Ford or the writers of witty columns in the evening papers.

### Our Civic Publications.

The *Weekly Bulletin* issued by the Health Department is a great little publication. Through it the medical men of the city are kept informed about municipal health conditions and official measures in an admirable way. To the newspapers it must be of great informative value. We think it would be a mistake ever to expand such a publication, and in fact we don't fancy that such expansion has been contemplated. Its character as a bulletin is just what makes it so valuable, for it is read. A larger periodical would not be read. Publications like the *City Record* might well be improved and edited by some able writer. The *Record* could easily be made a most readable magazine, and

surely the citizens ought to have a civic journal which they could read. We have often wondered, since the Health Department's *Weekly Bulletin* was issued, why the great Public Charities Department did not get out a similar publication. The medical interests of this department are quite vast, and as for its sociological side, that is vast indeed. The institutions within the purview of this department form a large city in themselves, and the medical men and social workers connected with them could certainly contribute most interesting data to a *Charities Bulletin*, which should properly be a monthly. We understand that the papers which are read at the monthly conferences of this department are of a high order. So far as we know, they are seldom or never published. We hope to see the Commissioner inaugurate a Charities journal.

### Gen. Gorgas in a New Rôle.

The receipt of an address delivered by Surgeon General Gorgas in Cincinnati last September on the economic causes of disease has aroused our keenest gratification, for here we have an instance of an accomplished sanitarian turning his attention and trained talents upon social as well as upon sanitary engineering. The paper dealt optimistically with the single tax as a remedy for poverty and the diseases that are engendered by it. In these days of applied science it is about time that great experts called us away from our endless tinkering with end-results, such as individual consumptive patients, and got us interested in large reforms. The encouraging thing about this paper of Gorgas is not the advocacy of the single tax in itself, but the revelation of a great sanitarian interested in constructive social attempts to remedy economic sources of disease. Most eminent physicians seem afraid to identify themselves with any definite movement. For a man as great as Gorgas to commit himself is a refreshing spectacle. We sincerely hope the mossbacks will quicken their steps.

Copies of the address, by the way, may be obtained at three cents each from the Joseph Fels Fund of America, Blymyer Building, Cincinnati, O.

### Coming Events Cast a Shadow.

We like so well that provision of the Federal law relating to the necessity of securing another prescription from a physician before an original one calling for a narcotic can be refilled that we should like to see the principle extended to all poisons. Why should any one be free to renew indefinitely prescriptions for acetanilid-bearing prescriptions, or strychnin, or atropin, or digitalis, etc.? This sort of thing ought to be under better control. Pharmacists ought to favor thorough-going regulation, both because it would relieve them of their present undue responsibility, and because it would go far toward ending dispensing on the part of the physician. The dispensing physician supplies what his own prescription calls for mainly to insure the return of the patient for renewal or a new prescription. If the patient were compelled by law to return to him for renewals he would, in many instances, quit dispensing. Physicians should favor regulation, not alone in the interest of the patient, but because of obvious economic advantages.

We note that orthoform has been included in the Government's list. A little while ago we would have been peeved by its inclusion among habit-forming drugs, but since we have seen a light we would not be offended by the inclusion of sugar of milk.



## Miscellany

CONDUCTED BY ARTHUR C. JACOBSON, M. D.

### Hahnemann's One Experimental "Proof."

Hahnemann, the founder of homœopathy, was led into the fallacy of concluding that quinin occasioned symptoms like those of malaria because of a personal experience. In his case large doses of cinchona produced in a few days well marked symptoms of ague. Therefore, he reasoned, cinchona cures ague because it induces symptoms in a healthy person similar to those of ague. "The paroxysm," wrote Hahnemann, "always lasted two or three hours, and reappeared when I repeated the dose, but at no other time. I omitted it and was well." Upon this experiment Hahnemann based his entire platform of *similia*. "This," says C. Wesselhoeft, himself a homœopathist, "was the only experiment Hahnemann ever made in order to establish his dogma."—(*Hahnemann Monthly*, August, 1896, p. 499).

It is a well known fact that quinin, administered to a person afflicted with chronic or latent malaria, will often start up a paroxysm. This has been noted over and over again by competent observers (S. Solis Cohen, Culbreth, Potter, Koch, Otto, Brettas, Robertis, Karamitsas, Canellis, Tommasselli, Muscato, Carreau, Pam-poukis, Chomatianos, Plehn, Rizopoulou, Guyochin, Monneret, Rivet, Dasset, Cachère, Ketchen, R. S. Williams, D. R. Wallace, W. P. Barton, W. H. McLean, E. D. Daniel, W. P. Hart and B. Lewis). The reason why this phenomenon occurs may be found elaborated in an article published by the *New York Medical Journal*, December 22, 1906.

In short, Hahnemann was not "healthy," but infected with the plasmodia. And he suffered from *actual* ague after taking the quinin. The symptoms were the symptoms of ague, and not merely "like" those of ague.

In the light of our present knowledge it is perfectly evident that Hahnemann built his house of cards upon sand.

### What's the Answer?

You attend a case of pneumonia. The circumstances are such that you have the patient removed to a nearby hospital. Solicitous relatives assume that the sick man will remain under your care. You apprise them of the fact that the sick man will not so remain, and that your relation to him as a hospital patient will be exactly the same as that of any of his friends or relatives. The aforesaid relatives reveal mild surprise or are slightly mystified.

What's the answer?

### No Quest for Genius.

We were recently consulted by an anxious parent. His eldest boy, a high school student, suffered occasionally from slight lapses of consciousness suggestive of the minor form of epilepsy. The boy's mental powers seemed good, and he was possessed of something more than mere talent in respect of art, being a born illustrator. His drawings showed new points of view and the real creative spirit. They reminded one of that modern French school of illustrators whose productions have been described as "abnormally clever."

Well, we referred the boy to a neurologist, and were informed that the boy was a neurotic defective. His mental activities were to be curtailed and his creative efforts discouraged, etc., etc.

We were a bit chagrined, for we had advised that

his special powers be encouraged in every way, and that he join a class in illustration in a special school in Manhattan as soon as that might be expedient, which seemed to us to be the line of least resistance for him. To us, the development of his special talents seemed wholesome and the best way to utilize his unusual energies. His very defects seemed an earnest to us that he belonged in that poorly understood and more or less resented class known as geniuses. Society is not hospitable to these abnormal people and the pedants of medical science would hamstring them, seemingly. Not conforming to our standards they must be denatured as far as possible.

What would have happened to some of the famous ones of the past had they fallen under the tutelage of the priesthood of mediocrity now attempting to control our intellectual destinies? How, we wonder, would Rousseau have been classified as a boy by these cerebral measurers? Into what group would Goldsmith, and Sheridan, and Coleridge been placed? The names of the whole glorious group of so-called defectives suggest themselves. If present-day methods of classification had as their object the identification of potential types, rather than the augmentation of human scrap heaps, they would be better justified. Little or nothing is heard of such a quest, and some of the exponents of the modern methods go so far as frankly to declare that the well-being of human society depends upon the conservation of average types, and the deliberate elimination, as far as may be, of the atypical.

Luckily, specially gifted people not classifiable under any of the prevailing standards have a fortunate power of confounding doctrinaires, eugenists and psychiatrists alike, and of creating their own worlds. Instead of finding their way to the dung hills assigned to them we descry them twiddling their toes from Olympian heights and making copy of the Pinchbecks, Pecksniffs and Pickwicks whose birdlime and traps have failed to ensnare them. It is an exciting game and many are smothered, but the net results favor the defectives.

The boy in question has escaped the neurologist's net and has a good start. Let us hope that what has happened so often before will happen again, and that his name will be a household word when that of the neurologist is forgotten.

### Medical Dilettanti.

Are there many dilettanti in medicine? Well, we should rather think so. We have heard of the reservation of certain staff places for men of a particular university set, meaning by "particular" membership in a well known senior society; men of means who have taken up medicine as a kind of pastime. These men receive a good training, do no harm, and fill space with their anatomies and cigarette smoke. What becomes of them is a question like another which has never been solved—what becomes of old medical diplomas?

We don't know. Perhaps they have "breakdowns" and give up the game.

These men are a good deal like the wealthy young scions of New York families who take up law and then look after poor clients' interests in the courts. There is quite a flock of such legal dilettanti. An article on them in a daily paper recently stated most ingenuously that some of them were really very good lawyers.

### Neither Sordid Nor Sensible.

An inspired reformer within the ranks proposes that the profession use some of its latent, elephantine power, and capital, in its own behalf. It should capitalize, direct and profit from a medical insurance corporation

of its own creation, in whose service should be enlisted those medical men now employed by the old line companies. A killing competition should be inaugurated against all rivals. This man argues for the application of autocratic power against many things. The medical trust which he postulates should take it upon itself to certify drug stores, etc. It would also see that the health boards stopped treating people and using nurses to do physicians' work.

All very well as an academic proposition. This dream is our friend's idea of practical fraternity, but would it not be the fraternity of buccaneers?

Perhaps the reason why professional unity seems farther off than ever in this commercial age may be because of the high ethical ideal always postulated as a basis. High ethical ideals don't appeal.

Would we amalgamate better upon a sordid basis? Perhaps so, but among men so actuated it is easy to foresee what would happen. There would be a merry cutting of throats and even the sordid subjects would not be attained.

It is a sad fact, however, that rational unity does not seem feasible, with only the conservation of legitimate interests in view. It appears that we are neither sordid nor sensible.

We are to be reprehended in any case for our patent cretinism in the face of present-day conditions.

#### The Medical Shut-Ins.

Too many medical men are living narrow, shut-in lives. They seem concerned only with their immediate *milieu*. Once their personal economic problems are solved they selfishly refrain from taking any interest in the larger problems, let alone taking any action. It is the small men and most of the big men who are derelict.

Professor Giddings, the Columbia sociologist, has reproached the great organizing and executive geniuses of the commercial world for not tackling the great problems of poverty, the world distribution of foodstuffs, etc., and solving them as they solve greater and more intricate problems. They are perfectly capable of doing so. In the same spirit we challenge the first-rate minds of the medical profession actually to take up and solve the great questions confronting it. They, too, are perfectly capable.

During the social revolution in Rome at the beginning of our era the starving millions were killed off by the Government. That was the Roman solution. Our method of dealing with them is even worse. Let us not flatter and delude ourselves. Can we never have a rational solution? Our cause is surely bound up with that of the workers who produce the world's wealth. Shall we always remain Peter Pans, sycophantic retainers of those who wage industrial and militaristic wars?

#### Religion and Insanity.

The line between these is difficult to draw. The man who claims that "The Lord" influences him is usually put in the list of the insane. This theory, if true, destroys the efficacy of prayer. If God cares not for humanity and *will not answer prayer*, then religion is a farce. The so-called spiritual realm is only a freak of the imagination and the hereafter a myth. It is wonderful how many crazy people keep out of the asylum. If all the so-called believers are insane and were put where they belong, then the vast expenditures wasted in building churches, paying the clergy, and spent on missionaries could be used in taking care of the fools. It's a glorious thing to be in your right mind and

not be influenced by anything religious, to recognize that Christ and His followers are only a gang of lunatics, that the Bible is only the conception of benighted minds, and that when our patients die that is the last of them; no hereafter, no Heaven, no Hell, no resurrection, no anything taught in the Bible—this is *science* with a big "S."

About how long do you think it will take to cure all these lunatics and to convince people that the theory of *spiritual* things is only foolishness, that the reported conversation between Nicodemus and Christ never happened, and if it did happen Christ was the fool and Nicodemus the sane man. Eh! Oh, Ye God of science, how grateful we ought to be to you for having shown us our true relation to the *now*, and that for us there is no future, that this life is all, and the only sane thing to do is to eat, drink and be merry, for to-morrow we die; and that the war in Europe is a blessing! The scientific way of life is to kill off the fools and make room for the sane. Truly this is an age of progress in which we see things just as they are! If the war goes on for a few more years and our country becomes blessed by getting into it and slaying all the fools and criminals, then we will have all the benefits of science.

W. P. HOWLE, M.D.,

Charleston, Mo.

#### "R. L." on the Freak Yclept Man.

"What a monstrous spectre is this man, the disease of the agglutinated dust, lifting alternate feet or lying drugged with slumber; killing, feeding, growing, bringing forth small copies of himself; grown upon with hair like grass, fitted with eyes that move and glitter in his face; a thing to set children screaming;—and yet looked at nearlier, known as his fellows know him, how surprising are his attributes!"

—R. L. STEVENSON.

#### Chronic Diseases of the Heart, Arteries and Kidneys.

A. E. Shipley, discussing these diseases, finds that: 1. One-fifth of all deaths are due to chronic diseases of the cardio-vasculo-renal type. 2. One-fourth of all deaths are caused by this group plus similar diseases of a degenerative character. 3. While the general death rate is steadily diminishing, the rates for these diseases are increasing. 4. Analysis of the general death rate shows its decrease to be the result of greatly lessened mortality in the early age groups, but beyond 25 and 30 years of age there is an actual increase, growing proportionately larger as advanced age groups are reached. 5. These diseases are characteristic of middle and advanced life, and are responsible for the increased mortality in these age groups. 6. The marked accumulative increase noted in the advanced age groups, seems to be due to the earlier inception of these diseases. 7. These degenerative diseases affect both sexes, but in females their baneful results are not shown until later in life. Shipley believes the greatest preventive measure is health education of the people.

Principles of correct living taught in early childhood and followed through youth and adult life will eliminate many of the important factors in the causation of this disease. The institution of periodic examinations of people of adult life will be one of the greatest factors in reducing illness and fatalities.

The development of these circulatory affections is notoriously insidious, but the warning signals of danger would in most cases be detected as the result of oft-repeated careful physical examinations.—(*Monthly Bull. N. Y. Dept. Health.*)

## The American Association of Clinical Research

JAMES KRAUSS, M. D., Permanent Secretary and Editor.

### UTERINE FIBROIDS.\*

J. D. GIBSON, M. D.,  
Denver, Col.

This subject has elicited in the last twenty-five years much attention from the medical world. The treatment of this condition has changed and varied as kaleidoscopically as any subject in medicine or surgery in that time. Twenty or twenty-five years ago all of us who were in practice of medicine at that time, will remember that we heard many papers read and discussed at medical meetings in which the subject was considered a purely medical one, when the authors wrangled over the value of different hypophosphate preparations, iodine and ergot, each one claiming good results in his cases.

About this time, you occasionally heard intimations from the illustrious Apostolli, that there was a better, different and more certain way of treating these cases by the use of galvanism. This method was out-stripped and laid on the table, figuratively speaking, by the triumphant advance of surgery following the successful work of McDowell in the abdomen, whose work Sims, Tait and Lister exploited in such a wonderful manner, making surgical cases out of many conditions never dreamed of before, and into this galaxy of diseases uterine fibroids immediately found what was supposed to be its final and complete resting place; but not so. In 1902 there came a lady to me with a very large uterine fibroid, complicated by a large aneurism in the left iliac region. It was considered a serious complication, and she would not submit to operation, so galvanism was desired. The tumor was so immense, causing more discomfort, inconvenience and distress from pressure than we would have at a full termed pregnancy, making it an unfavorable case for treatment by the Apostolli method, but owing to the aneurismal complication it was decided to give the patient the benefit of the doubt.

Galvanism relieved the patient considerably, but the tumor resolved so slowly and the hemorrhage was so severe that I feared malignancy, and so turned on the tumor x-ray to head off any complication in that direction. The effect was very pleasing to the patient. She found she could soon move around with more ease and comfort, the pressure symptoms being considerably relieved after a few treatments; the hemorrhage was less and the general ensemble of the patient was decidedly benefited. The rays were given from an old Kinraide coil, over the front of the abdomen, then over one side and then the other, making three different places of exposure. These treatments given from this coarse wire coil were given for ten minutes, usually every other day, and were continued until the abdomen and sides were well browned and it was not safe to give any more. The patient was decidedly benefited, the tumor mass decreased in size considerably and hemorrhage much less. When patient returned to her home in another State, she was lost sight of.

This was undoubtedly the first time that x-ray was ever brought into play in the therapy of uterine fibroids. I reported the case before the American Electro-Therapeutic Association at the Katerskill meeting in September, 1902, which was duly recorded in the transactions of that meeting, and also has been called attention to

frequently, both in his book on the subject of Electro-Therapeutics and other writings by Dr. William Benham Snow.

Since then much has been written, both in this country and abroad, upon the subject of roentgen therapy on the subject of uterine fibroids.

When we consider that Mayo reports less than one and one-half per cent. of failures from all abdominal operations for uterine fibroids, when not complicated by malignancy, one wonders why anything else should be needed. This certainly is a wonderful report made by one of the world's most competent surgeons, yet roentgen therapy bids fair to supplant the knife in the vast majority of these cases.

Pfahler of Philadelphia who has treated many cases of uterine fibroma with roentgen therapy, considers it the method of choice for the control of hemorrhage in patients approaching the menopause in whom carcinoma can be eliminated. He does not consider it the method of choice under forty years of age. It should be resorted to in any age where there is serious organic lesions of the heart, kidneys, anemia, etc., barring surgical interference. Then again, there are some patients who positively will not submit to the knife and then its use is admissible.

It is very evident at the present time that the men who have treated the most cases and have had the most experience with the method, are the most enthusiastic, and some of them have even gone so far as to claim that all uterine fibroids should be treated by deep roentgen therapy, and that only certain exceptions should be treated by the knife, an entire reversal of the edict of one and two years ago when the knife, it was thought, should be the general rule of procedure and the x-ray the exception.

**Action of x-ray.** It has been assumed by practical experiments, upon animals and human beings (Albers-Schönberg and others) that the testicles and ovaries are the most sensitive of all tissues to the effects of the roentgen ray. These organs can be seriously affected without any effects on the overlying skin. This special effect on the ovaries may have largely to do with the results on the tumor and hemorrhage by lessening, modifying or obliterating the effects of the ovarian stimulus on uterine menstruation, thus producing therefore anemia instead of congestion and flow. The x-ray has also a direct effect on the tumor itself, thus producing retrograde metamorphosis and by its squeezing and contracting effect, added to the already present condition of anemia above mentioned, the tumor decreases in size, pressure symptoms are soon relieved, followed by cessation of hemorrhage, and much improvement in the general condition of the patient.

**Technique.** This subject has received probably more thought, and has evolved much that is new and important in the field of roentgen therapy; in fact, it has made significant the word deep roentgen therapy as the effect of the rays must be very penetrating and capable of doing effective work deep in the pelvis and abdomen to accomplish results. Pfahler in America and Kroenig and Gauss of Freiburg, Germany, have had much to do with the developing of the technique in these cases. Pfahler announced several years ago that through a sole leather filter he was able to pass much larger doses of x-ray and get a deeper result in the tissues than it was possible to do without it. Today

\* Presented to the American Association of Clinical Research at its sixth annual meeting at Baltimore, Nov. 6, 1914.



this filter has been increased by aluminum from one to three m. in thickness, cutting out all soft or slightly penetrating rays. In other words, the deeper the penetration required, the thicker the filter must be to keep out the ray that would be harmful to the skin. The hard and more penetrating rays thus are only made use of. To get these rays sufficiently penetrating, and yet abundant in volume, requires a very powerful machine and tubes that will stand very powerful currents for a considerable length of time. I prefer the interruptless transformers for the production of the currents desired and also my own air proof tube, or the Coolidge tube through either of which a maximum dose can be given whenever desired. Kroenig and Gauss have reported more cases and claimed the most brilliant results in the treatment of these cases, they are probably the originators of the idea of treating by what is known as cross-firing through many different fields. By this method, the abdomen and pelvis generally are divided into small squares, and through each one of these squares is given a heavy dose of x-ray with the tube centered on the center of the uterine tumor or ovary. By this cross-firing method twenty-five or thirty different exposures can be made into the tumor and ovarian tissues, while the skin in no one place is exposed to more than one treatment of the rays. It will be seen by this method that enormous doses of x-ray can be gotten through the tumor and other diseased parts by these converging rays. This method of treatment is known as the Freiburg method of exposure, and it is usually, when a full dose is given, not necessary to repeat the dose for about twenty-one days. The results reported by this method have been astounding, both in quickness and in permanence of results.

This work, to be well done, should be done under the eye of a competent gynecologist, by a roentgen therapeutic expert as it is one of the most difficult procedures of roentgen work, yet in proper hands the outlook is certainly very promising.

### SUBJECTIVE SYMPTOMS IN THE DIAGNOSIS OF RECTAL DISEASES.\*

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Diagnosis in its limited sense is the identification of diseases from all the available pathological phenomena. In its broader meaning it includes also a comprehensive understanding of the causes and consequences, as well as a knowledge of the associated morbid processes and the probable damage sustained by the tissues. As applied to proctology this subject is too broad to receive proper treatment in the brief time allotted to me in this paper and I shall therefore aim to point out some of the sources of common error in rectal diagnosis, and as far as possible, by the use of illustrative case reports, show the importance of digital and proctoscopic examinations as a safeguard against diagnostic errors. As diagnosis is essential to treatment, so symptoms are indispensable to diagnosis.

Modern investigators have sought to establish more positive means of ascertaining the causes of disease by the use of laboratory and physical methods, only to find that all of these means of inquiry into etiology and diagnosis are indispensable and inseparable. Without attention to symptoms the advantages of early diagnosis would often be lost. Without the benefit of physical examination the physician's prejudices or individual

habits of thought might so obscure the prevailing facts as to lead far away from a correct conclusion.

There are only a few diseases in which symptoms can be ignored as diagnostic aids, yet taken alone they are often most untrustworthy. The patient may neglect to mention the sign of greatest importance and dwell upon irrelevant manifestations; he may incidentally speak of some serious symptom as though it were a sign of robust health; or he may be worrying about some made-to-order symptom intended by the writers of patent medicine advertisements, to harass the minds of those who read.

The true value of subjective symptoms in establishing a diagnosis depends upon the patient's accuracy at descriptions and the physician's skill in interpreting and using them as a basis for further investigation. It is hard to understand why our fellow practitioners will so easily pass by interesting cases with a snap diagnosis of piles, without making an examination, as though it were a generic term applying to all rectal diseases; but probably the answer may be found in the patient's well-known habit of self-diagnosis and treatment which serves to dampen the investigative zeal of the physician and to incline him toward the apathetic course of perpetual palliation.

It may be a fortunate provision of nature that many diseases are attended with pain, for patients will often disregard every other sign of trouble, but will sooner or later respond to the insistent pangs of pain, believing it to be the only danger signal worth heeding. Different patients suffering with the same affliction may describe their sensations in widely different ways. Some call any form of discomfort pain. Others who are peculiarly sensitive, as the neurasthenics, have an exaggerated conception of pain. Therefore, while pain is one of the most suggestive of symptoms, it is never safe to depend wholly upon the patient's description of its quality or intensity, because it may be modified by excitement, by temperament, occupation, or various positions of the body, as well as innumerable causes wholly unrelated to the morbid processes in question.

One of the most common of diagnostic blunders is the assumption that the absence of pain is a guarantee of health. Beginning rectal cancer is not usually painful unless the lower rectum or anus is involved. In such cases it would be most unwise to feel safeguarded by the absence of pain. Anal ulcer or fissure is probably the most painful of rectal diseases, yet it is always curable and therefore in no wise comparable to the malignant but painless conditions just mentioned. Although bleeding hemorrhoids constitute the most frequent cause of secondary anemia they are regarded by the average physician with little concern and allowed to pass as though a self-limiting affliction.

We hear much about constipation as a predisposing cause of hemorrhoids but experience seems to justify the belief that constipation and obstipation are often effects rather than causes of rectal disturbances. When our patients boast of two or three loose daily defecations as evidence of vigorous health, we understand the fallacy of this idea, since diarrhea is a common symptom of rectal ulceration, stricture, and the malignant conditions.

Ulcer of the posterior commissure of the rectum has often been treated for sciatica because it is so easy to accept the patient's diagnosis of his case. Painful defecations are often erroneously explained as symptoms of constipation. Ulcers of the anterior wall of the rectum have been mistaken for cystitis, stone in the bladder, inflammation of the neck of the bladder, or

\* Read at the sixth annual meeting of the American Association for Clinical Research, at Baltimore, Nov. 7, 1914.

some gynecologic state. Long continued rectal irritation is frequently the beginning of neurasthenia, the cause of which would remain unknown without a rectal examination.

When symptoms are studied with reference to their character, location and time of occurrence, they seldom lead us astray. The sharp lancinating pains during and after the passage of a hard stool are almost surely caused by anal fissure. Internal hemorrhoids are associated with a dull aching sensation and a feeling of fullness. A burning or smarting pain usually points to ulceration. The pain of fistula is most erratic, varying from acute pain aggravated upon the slightest movement, to complete absence of pain even in chronic cases of many months duration.

Throbbing pain which makes its appearance suddenly, becoming constant, is suggestive of abscess. Alternating sensations of burning and itching may indicate fistula, ulceration or fissure, and the most intense itching may be caused by enlarged papillae or some obscure factor such as the coli-bacillus, streptococcus fecalis, or staphylococcus infection. The subjective symptoms in these cases being greatly out of proportion to the discoverable objective signs.

Considering the frequent complications met in rectal practice the maze of difficulties in the way of a diagnosis from subjective symptoms alone, is obvious. To show the pitfalls into which haphazard methods of diagnosis lead, I shall call your attention to a few interesting cases and attempt to show why the diagnosis in these instances was missed.

CASE 1. A young married woman of 26 consulted me in 1890. Her family history was excellent. Previous history good except that she had been troubled with boils at various times for the previous three years. With each change of residence she employed a different physician, who applied a different remedy. Two of the boils which were situated near the anus had been lanced, but had never seemed to entirely disappear. Upon careful examination, this case proved to be a complete fistula.

These facts are of interest because not one of the four physicians employed made a diagnosis of fistula when either the history, symptoms or superficial examination should have eliminated a diagnosis of furunculosis. The mistaken diagnoses in this case must have been due to an error in judgment or to a desire to corroborate the preceding diagnoses.

CASE 2. A real estate dealer of 63 was referred to me with the familiar diagnosis of piles. His family history was good. For many years he had been constipated, the past ten of which he had suffered with painful defecations which increased in frequency until he would be disturbed eight to twelve times a day. He complained of feeling exhausted and slept poorly. Finally there was a sensation of great rectal fullness and a constant desire to evacuate the bowels with but slight or no result. He succeeded with difficulty in replacing the protruding mass thought to have been piles. On the occasion of my call he had been unable to return the edematous mass, measuring six by ten centimeters. This growth had the appearance of and later proved to be an adenoma, which when replaced instantly gave the patient a compelling desire to defecate.

A wrong diagnosis in this case was the result of jumping at conclusions and failing to give the patient the benefit of a careful examination.

CASE 3. A married lady of 53, good family history, complained for several months of fainting spells. Her temperature, pulse, blood pressure and urine were normal. Heart sounds were of good quality. She had been constipated for about eight years. There was a slight loss of weight and her friends noticed that she had lost her usual ruddy complexion. She had passed some blood with the stools, but had been reminded by her family physician that nearly everyone had piles and that a slight hemorrhage was of no consequence. A diagnosis of neurasthenia was made and the rest cure advised. A decided improvement followed the treatment until the patient resumed her usual duties, when she gradually lapsed back into her former condition.

The case was later diagnosed as anemia and the usual diet of hematinics prescribed without benefit. The fainting spells occurred more frequently and careful inquiry revealed the fact

that there was considerable daily rectal hemorrhage. A proctoscopic examination showed the presence of ulcerated internal hemorrhoids, and after operation the patient regained her usual weight and strength, verifying the diagnosis of secondary anemia from bleeding hemorrhoids. In this case the symptoms were very suggestive. A rectal examination would have solved the problem in the beginning and relieved the patient of much useless treatment.

CASE 4. A housewife of 49 was examined in 1910. She was weak and anemic, slept poorly and was exceedingly nervous and moaning most of the time with a dull pain in the sacral region and legs. She had been examined by two physicians who investigated her history sufficiently to know that among other afflictions she had suffered constantly for eighteen months with protruding hemorrhoids. A diagnosis of psychosis was arrived at, with the recommendation that she be sent to a neuropathic sanatorium for treatment. This course was rejected by her family. When I examined her the hemorrhoids seemed to be the most plausible source of her troubles. An operation was advised. After the hemorrhoids were removed her general health gradually improved and she regained her strength sufficiently in a few weeks to resume her usual duties.

Here is an instance of the diagnostician blindly groping for the more elusive causes of disease while the real source of trouble is self-evident.

CASE 5. M. S. came to me in August, 1912. He had not felt well for a year; slept poorly, appetite was erratic, complained of headache and had fits of despondency. His family physician could assign no cause except overwork and advised a trip to California. A three months' trip through the West failed to bring relief. While in California a physician discovered he had a sub-mucous fistula. The patient refused to be operated on until reaching home. Examined by his family physician, he reminded the doctor of diagnosis of fistula and was told that there was no evidence of fistula. At this time he was exceedingly depressed and came to me with the preceding story. Upon examination I demonstrated a complete fistula, the external opening of which had nearly closed. He consented to operation and immediately thereafter felt greatly relieved in health and spirits, going about his daily duties with renewed energy for three weeks, when he returned to me with the original complaint of weakness, lassitude and despondency. I examined him again and found a small branch of the fistula had been omitted in the first operation. To satisfy myself that the mental depression depended upon the fistula and not upon some external cause, I did the second operation under local anesthesia, the patient believing the wound was only being dressed as usual. Complete and lasting relief from all the above symptoms resulted from the second operation. I mention these facts as much to illustrate the lack of importance usually ascribed by the general practitioner to subjective symptoms as to the imperfect method of examination so frequently used.

If diagnostic safeguards are ignored, certainly the treatment must fail. Our leading clinicians have sounded the note of warning that the cure for malignant states lies in the cure of simple conditions upon which malignancy tends to become ingrafted. If over half of the cases of rectal cancer originates in some simple and curable disturbances, then we have an exact measure of the cost of neglect in the diagnosis of rectal diseases.

Murray states skin infection is the important factor in pruritus ani. There are two varieties of this condition, one which may be coincident with some diseases of the rectum, in which the skin infection is not present; the other, which is chronic in character, and in which the skin infection is present. He believes that, in cases of rectal disease associated with moisture upon the anal skin in which pruritis is a symptom, the pruritis is coincident with, rather than caused by, these discharges.

#### Bronchial Asthma.

Sodii Iodidi.....  
Tinct. Belladonnæ Fol.....  
Tinct. Hyoscyami.....  
Tinct. Lobeliæ.....ââ f. 3ij  
Syr. Pruni Virg.....ad. f. 3iij  
M. Sig.: One teaspoonful in water four times a day.

—SWAN.

### Letters That Collect.

An always present problem with the physician is that of collections. Many collection systems have been brought forward that have at least succeeded in "collecting" money from the subscriber, but that on the whole have not proved satisfactory in bringing in the money from the slow debtor.

The great drawback to most systems and collection agency methods is that they depend entirely on an effort to scare the debtor, instead of appealing to the various reasons that induce different classes of men to pay up. Every passing day finds fewer and fewer men who can be scared by collection letters or collection agency methods.

Courtesy, common sense and persistency are the greatest factors in successful collecting. The following letters combine these factors and have proved successful where used. They are the result of over fifteen years experience of an attorney and credit man for several large business houses. After experimenting with many systems and letters, and eliminating those that did not get the best results, the plan of collections as expressed in these letters and postal card form, was chosen. There are methods that will get in more money in the first week or so, but that do not get the most out of the hundred dollars, and that in the long run are very costly to use.

#### LETTER No. 1.

In looking over my records to-day, I note a balance on your account of \$....., running back to .....

Will you kindly mail me your check for this amount, or advise me at once if you find the balance incorrect?

Thanking you in advance, I am,

Yours very truly,

#### LETTER No. 2.

I wrote you ..... regarding a balance of \$..... in ....., but so far have not heard from you.

Please write me at once, so that I will know whether you consider the balance correct, and when I may expect your check.

Yours very truly,

#### LETTER No. 3.

My letters of ..... and ..... regarding a balance of \$..... on your account remain unanswered.

It certainly seems to me that you might at least grant me the courtesy of an answer, even if you are unable to send your check at this time.

Kindly favor me in this regard, and oblige,

Yours very truly,

#### LETTER No. 4.

I am much surprised at your failure to answer any of my several letters regarding your account. My letters have certainly been courteous, and I have made no threats of any kind.

You know, of course, that unless I hear from you I will be compelled to adopt other means of collection, which I very much dislike.

It will save both of us useless expense and annoyance if you will write at once, stating just what you propose to do.

I will hold this account on my desk until the morning of ....., and will depend upon hearing from you by that time.

Yours very truly,

#### LETTER No. 5.

As I did not hear from you this morning, I had fully decided to take other steps to enforce payment.

However, a friend of yours advises me that he believes you to be entirely honest and straightforward, and I have therefore decided to wait a few days longer.

You must certainly realize that your standing in the community depends on your fair dealing, and fair dealing certainly requires you to answer my letters.

In view of your friend's statement, I shall expect to hear from you by return mail.

Yours very truly,

#### POSTAL CARD FORM.

I wrote you ..... and ..... No reply. Why? It is important that I hear from you at once.

The letters should be sent weekly and the postal cards every other day for 20 days, following letter No. 5, allowing two days for answer to last letter. The letters should be single spaced and the cards double spaced. Fill in the blanks in the second line of the card form with the dates of the five preceding letters. The efficiency of this system depends entirely on sending the letters and cards at times indicated. The first three letters are very short and easy to write, but they say all that is worth while saying in the opening letters. The fourth letter takes the place of the usual "threat to sue" letter. If the debtor is afraid of being sued this letter will get as good results as if the threat was actually made, and yet it leaves the matter entirely open so the writer can go after him again from another angle.

The fifth letter takes the place of the "threat to list" so that business men and other physicians will know of his indebtedness, and therefore refuse credit. This plan was followed with some success in past years and is still in use to some extent, but its value is becoming less and less. The reason is that all threats create a state of mental opposition on the part of the debtor, and he is likely to say "Well, list me if you want to, you can't scare me." This fifth letter, however, gives the debtor the same reason for paying, without making any threat, and it is even stronger, as he figures that some one he is dealing with and paying (most men have some one that they keep pretty well paid up) will know about it, and that his credit there will be endangered.

If this letter does not bring results, the cards should be sent. There are some men who do not read letters. Here is where the cards come in. The form is not only legal, but courteous and dignified, and it gets results. The first one or two cards will probably be thrown in the waste basket, but the fifth or sixth will get on the debtor's nerves, and as he does not know there is a 20 day limit on sending them, he will answer to stop them coming.

In conclusion, this system will not get money out of a man who has none, but it will get money from a man who has some, but not enough to go around, and so pays only the creditor who appeals to him in the right way. It will get the most out of the past due hundred dollars with the least effort, friction and expense. Do not make the mistake of having these letters printed in form style. They should be actually written on one's own letter-head.

### Pulsus Alternans.

J. B. Herrick, Chicago, suggests a method of determining the variations of strength of pulse by increasing or decreasing the pressure of the cuff of the sphygmomanometer, a method which so far as he knows, has not been described by others. As an illustration he says, in a case of symptoms indicating high blood pressure but where no irregular rhythm or difference in strength of pulse beats can be made out by palpation of the radial artery, when the pressure of the manometer reaches 195 mm. of mercury, the radial pulse which had been 80 drops to 40, and remains at that rate till 210 mm. is reached, then disappearing, testing in the reverse order and watching the changes in the added beats, it can be seen that the pulse is clearly of the alternating character. Sometimes other instruments may be required, but this will serve in most cases; and while the information given is not always essential, it is a help in making the prognosis, the pulsus alternans being rightly regarded as often indicating a serious impairment of the muscular efficiency of the heart.—(J. A. M. A., Feb. 27).



## Diagnosis and Treatment

### Common Errors in Diagnosis.

A. Abrahams learnedly discusses this important topic. The first are those due to gross ignorance and he notes two actual examples: Overlooking as a cause of deafness the presence of a large amount of cerumen; and failure to observe that a large pyriform swelling in the abdomen, four days after delivery, was not "acute metritis" but a bladder containing a gallon of urine.

Ignorance that the surgical complications of tubercles occur very early in the disease may be of immense importance, *e. g.*, Charcot's joint, perforating ulcer, gastric crises, and spontaneous fractures; all of which may occur before the appearance of an Argyll-Robertson pupil or the loss of knee jerk.

It is ignorant to diagnose articular rheumatism under the age of two, for at that age it is practically unknown. In this way, scurvy or acute epiphysitis might be overlooked. Again, ignorance of the symptoms of early phthisis is common through the undue attention which is paid to the recognition of *signs, e. g.*, definite apical dullness; whereas, by the time dullness is present, the condition is an advanced one. It is not always taught that the symptom-complex of rheumatism has not the same representatives in a child as in an adult, but that there are more frequently encountered, not arthritis, but cardiac dilatation, tonsillitis, chorea, emotionalism, nocturnal enuresis, and other nervous manifestations. A misconception of a similar character results in overlooking malignant disease of certain parts, because it is said never to occur in early life.

Another example is the popular identification of certain substances in the motions of infants as food residues. These are really insoluble soaps, that is, mucus. Milk residues do at times appear in the stools; but, on the whole, it is a common mistake to suppose that feces consist mainly of undigested and unabsorbed food, instead of merely disintegrated products of epithelium from the bowel. Gastric ulcer used to be regarded as a common affection of young women, and the ratio of man to woman was given as 1:9. It is now evident that a large number of cases of appendicular gastralgia were diagnosed as gastric ulcer, and the sexual ratio of true ulcer has actually fallen to 1:1.25. Such an error arose from failure to utilize certain methods of diagnosis. Would any practitioner prescribe spectacles after merely listening to a patient's recital of symptoms? Yet, generally speaking, he will be prepared to treat his "dyspepsia," when he does not know if there is too much acid secreted or too little, whether the activity of the glands is satisfactory or impaired, and if the motility of the stomach is efficient. Only experience can teach what may be regarded as a sufficient sign of a certain condition. Want of experience applies particularly in chest cases, for there is the difficulty of setting a standard of sounds which are healthy, and it is quite a common enough thing to be in doubt which is the healthy and which is the diseased side. Consider the poor victim who has sacrificed a normal inferior turbinate, which had been diagnosed as a nasal polypus. Many cases of functional albuminuria are treated as being of grave significance; creatinin in urine has been regarded as sugar. A reduplicated first sound may be mistaken for a presystolic murmur, when it may be due only to excitement or deep inspiration.

The need for judgment is well exhibited in the diagnosis of pregnancy. Scabies is frequently not sus-

pected in a cleanly person, more especially since it is in such circumstances atypical.

An obstinate case of rheumatism localized to one joint is treated as tubercle.

A child who is merely deaf is condemned by the inexperienced as being mentally defective. Some mistakes are due to obsessions. Take the syphilomaniac, for example, who sees everything under the aegis of the spirocheta pallida, the protean manifestation of which give a specious explanation for practically every sign and symptom which a human being can manifest or manufacture. "A stuffy nose" may be only a local manifestation of myxedema, "a dry throat" an accompaniment of diabetes, a "laryngeal spasm" an expression of locomotor ataxia.

We should think anatomically. Confronted with a case of dysphagia, one should think all the way down from the tongue itself; there may be, for example, an inflamed gland beneath the sterno-mastoid. Omission to think anatomically results in overlooking all sorts of reflex phenomena, *e. g.*, otalgia from carious teeth, when no complaint of toothache has been made. Cough, hiccup, and syncopal attacks may all have an aural basis, and abdominal pain in a child, which has been diagnosed as "congested liver," may be due to spinal caries, or in an adult occurring after exertion is most frequently an expression of cardiac trouble. Many mistakes are from incomplete examination. Beware of "rheumatism." Which of us has not, with a scalpel, let "rheumatism" out of a swelling? And under this convenient diagnosis have masqueraded sarcoma, osteomyelitis, popliteal aneurysm, and acute epiphysitis.

A complaint of pain in the chest or cough demands at least a cursory stethoscopic examination. One could give innumerable examples of errors due solely to limiting the examination to a portion only of the body. As a commonly occurring example, one may cite the diagnosis of a specific fever from a rash, sore throat, and fever, when a complete examination of the patient would have revealed an incompletely healed sore on the penis and enlarged lymphatic glands.

The most elementary precautions are sometimes all that is needed for the avoidance of gross errors. It is unpardonable, for example, to omit a digital examination of the rectum when appropriate symptoms are present. In any case of injury to the eye, it is as well to ask to be shown the instrument which caused the injury; for example, the missing prong of a fork suggests a search inside the eyeball. In a nasal case, the patient should be asked to show the handkerchief—the pathological flag as it has been called.

An enormous number of grave errors may result from simply neglecting to take the temperature. Think how pyrexia coupled with headache and general seediness suggests typhoid fever instead of some trivial disorder; how the same feature allied to a cough, weakness, malaise, and indigestion builds up a strong suspicion of phthisis; how the temperature aids in the diagnosis of that obscure condition, pain in the side—whether neuralgia, herpes, muscular rheumatism, splenic infarct, abscess of the chest-wall or pleurisy, may be present; whilst, finally, its association with abdominal pain labels the condition as serious, straightway demanding an order for bed and further searching examination.

The thermometer, too, shows that the cure of a condition, which has been satisfactorily diagnosed, is not proceeding in a normal manner: *e. g.*, in pneumonia, delayed resolution, the development of an empyema, or

the incursion of the pneumococcus to the peritoneum, the joints, or meninges; or in rheumatic fever, the danger-signal of endocarditis. There may be instanced as well the leaking of a gastric ulcer, or the urgency of a complete routine examination in chronic Bright's disease, in which the normal course is apyrexial.

A particular source of error is the overlooking of the more serious of two simultaneous conditions. It is a good general principle to include all symptoms so far as possible under one cause, but the complete connection may not be evident, as in malignant disease of the upper end of the rectum giving rise to very few symptoms but by pressure on veins causing piles. Take a case of chronic ear discharge which developed cerebral symptoms. Trephining was the obvious treatment; but nothing was found, and the patient died of what was shown at the autopsy to have been uremia.

Some mistakes come from inherent difficulties in the case. Take *x*-rays for example, and, as a familiar instance of their utility, the fact that they have demonstrated that fracture of the scaphoid, which once was regarded as a pathological curiosity, is now recognized as a fairly common occurrence. Yet *x*-rays are not unequivocal; difficulties bristle on account of the angle at which a picture is taken. Again, shadows are only shadows; anybody might mistake a gall-stone for a stone in the right kidney, or a clarified gland for either. Circumstances alone may supply insuperable difficulties. Think of the handicap which a bad light and a dirty skin impose in the diagnosis of a specific fever rash. Urinary cases appear to offer many traps. In the abdomen again, many people cannot tell an organ by feeling it, and not a few when they see it; moreover, the extra-abdominal causes of severe abdominal pain are many.—(*The Practitioner*, March, 1915.)

#### Pain Symptoms and Tenderness-Touch Diagnosis of the Abdominal Organs.

J. H. Fobes has found that touch diagnosis has been of great service in bringing out lesions of the various organs concerned. For instance, in eliciting gall-bladder troubles, a line is drawn from the ensiform cartilage to the anterior superior spine of the ilium; then another line is drawn from the cartilage of the ninth rib to the navel. Where these lines cross, percussion is made with the bent middle finger.

In perforated gastric ulcer the peculiar burning pain over the gastric area quickly following a perforation, followed by excessive rigidity and extreme tenderness, is distinctive. Soon the pain and tenderness radiate to the lower right quadrant as the gastric contents pass down between the omentum and anterior abdominal peritoneum. While gastric ulcer usually perforates anteriorly, duodenal ulcer usually perforates posteriorly. For this reason and because the chemical reaction of the contents is mostly alkaline, perforation of the duodenum is not associated with such severe symptoms; in fact, the condition may be confused with appendicitis.—(*S. G. and O.*, April, 1915.)

#### Heliotherapy of Surgical Tuberculosis.

H. Schmerz says heliotherapy represents the optimum of climatotherapy. The sunlight treatment of surgical tuberculosis, which has given the best results in mountainous districts and on the seashore, gives satisfactory results also on the plains and even in large cities. Heliotherapy should form the basis of all treatment of cases of surgical tuberculosis in the lowlands as well as in the cities. A satisfactory explanation of the effect of sunlight on the human body in healthy and diseased con-

ditions cannot be given at the present time in the absence of extensive experimental research. The effect of solar energy on tuberculous tissue and the role played by the resulting cutaneous pigment cannot be definitely explained.

Schmerz reports in detail the sunlight treatment of 34 cases of surgical tuberculosis, principally of the bones, joints, glands, and skin. Eleven were cured, 19 improved, and 4 died. The results were not as brilliant as those reported by Rollier in the highlands, but they were in the main very satisfactory. Supportive measures are indicated, as proper diet, iron, arsenic, and in the cooler seasons cod liver oil with phosphorus. Freund's radiotherapy of surgical tuberculosis should also be used in appropriate cases. Finally, surgical and orthopedic measures should be undertaken where indicated. Schmerz urges the erection of special sanatoria for the sunlight treatment of surgical tuberculosis.—(*Beitr. z. klin. Chir.*, 1914. By *Surg. Gynec. & Obst.*)

#### Intraspinal Administration of Morphin.

H. McGuigan and E. L. Ross, Chicago, in a preliminary note, call attention to the pronounced and unexpected action of morphin when injected into the cerebrospinal canal or directly into any part of the central nervous system. Ordinarily, a sedative calming effect is expected from morphin, but it is well known to laboratory workers that frogs develop tetanus after very large doses. Since the injection of drugs into the cord is not uncommon, the authors wish to advise care in this method. In a typical experiment reported, a 5 c.c. dose of a morphin-sulphate solution injected into the fourth ventricle of a dog, caused pronounced tetanic spasms. There are slight variations of the symptoms according to the location in which the injection is made. If in the lumbar region, the action develops first in that region, but it always causes increased reflexes in tetanus. Codein and apocodein apparently are inactive. The action of varying doses and the causing of tetanus will be discussed elsewhere.—(*J. A. M. A.*, May 1.)

#### Unskilled Tampering with Human Ailments.

"One who wants his watch repaired sends it, not to a blacksmith but to a skilled watchmaker: to one who knows the position and purpose of each of its delicate and intricate parts. Here the importance of expert service and the ability to render it are recognized. Not so, however, when the delicate life processes of a human being, rendered sensitive by sickness or injury, are in need of repair. Here the man who is careful to send his watch to an expert is likely to patronize the blacksmith when he or one of his family is ill. To recognize promptly and positively many of even the common diseases," says the *Journal A. M. A.*, "requires a skilled diagnostician who understands the use of scientific laboratory methods. The successful treatment of diphtheria, malaria and syphilis—as examples—depends on an early and positive recognition of the causative agent, respectively, the Klebs-Loeffler bacillus, the *plasmodium malariae*, and the *treponema pallidum*. To be able to do this requires a knowledge of these organisms and skill in the use of the microscope and laboratory methods of diagnosis. The cure of many diseases, such as tuberculosis, cancer, spinal meningitis, etc., depends not only on a positive but especially on an early diagnosis, and this likewise, requires a thorough training in modern medicine. Without a training in scientific methods, the diagnosis of these diseases is uncertain, or impossible, since the signs and symptoms easily lead to their

being confused with disorders requiring radically different methods of treatment. Without a correct diagnosis any form of treatment is guesswork and unscientific. A training in the branches fundamental to modern scientific medicine is an essential qualification for all who undertake to treat human ailments, no matter what treatment be adopted. It is immaterial whether the treatment be a form of massage or tissue manipulation, and given under the name of osteopathy, chiropractic, naprapathy or spondylotherapy; whether it be psychotherapy, given under the name of Christian Science, mental healing, or what not—the fact remains that any legislation relative to the regulation of what is known as the practice of medicine—that is, the healing of the sick—that does not recognize this fundamental fact is not in the interest of the public health or the public good."

#### Injection Treatment of Hemorrhoids.

F. S. Edwards relates his procedure in injecting hemorrhoids.

After a warm boracic enema, the piles are extruded at stool. The patient is then placed on a couch in the knee-elbow position, and the piles mopped over with a little warm antiseptic lotion. A hyperdermic syringe is filled with the following solution:

R Acid Carbol. ....	gr. xxiv
Glycerini .....	.5i
Aquam ad .....	.3ii

The needle, of good lumen, is then passed into the center of each prolapsed hemorrhoid in turn, from 3 to 6 drops being injected according to the size of the pile. This is usually quite painless. Swelling occurs at once, so the sooner the piles are returned the better. The patient is then allowed to go home, with a caution to return the piles at once should any prolapse occur, otherwise strangulation and sloughing might ensue. A second injection is sometimes necessary after the lapse of a month or two, but in many cases recurrence, if it takes place at all, is postponed for a year.—(*Practitioner*, No. 3, 1915.)

#### The Care of the Hair.

The promiscuous application of "hair tonics" and other nostrums is regarded by some authorities as an important cause of baldness. These haphazard applications, without any regard to the indications of the individual case, and at best valueless. The same is true of the numerous activities of barbers and hairdressers, when their efforts go beyond the use of measures directed merely to cleansing the hair and scalp. Their singeing the hairs, their various methods of massage, "hair tonics" and "hair restorers" and "scalp treatments" applied indiscriminately, without intelligent appreciation of the indications to be met, may be harmful; they are at best useless forms of diversion. There is no objection, however, to a good shampoo by a careful and clean barber or hairdresser. Having it done for one is a form of luxury.

Massage of the scalp as a measure to check the falling of hair is of some service when the scalp is free from dandruff. With dandruff present, it is of doubtful value or harmful. In massage of the scalp, all that is necessary is to give it a good rubbing, carried only to the point of producing a feeling of "life" and glow. This requires no special skill, but can be done for one more easily than one can do it oneself. Mechanical massage offers no advantages over simple rubbing, and is liable to be too vigorous.—(*Journal A. M. A.*)

## Surgery

### A Modified Grossich's Disinfection with Iodine for Operations.

On Tavel's instigation Reich-Brutzkus undertook the same histological studies of some modifications of Grossich's method as Walther and Tourraine performed with the unmodified method. The modifications are as follows:

1. Grossich, Walther, and others used 10 or 12 per cent. official tincture of iodine. In Tavel's clinic a mixture of pure iodine 3, absolute alcohol 10, and chloroform 90 was used.

2. The previously named authors allowed the tincture of iodine to act for 10 minutes; in Tavel's clinic the time varied: seldom 10 minutes, generally 5 minutes, sometimes 2 minutes, and urgent cases 1 minute.

3. The other authors gave two coats of iodine and a third after the closure of the wound; Tavel gives one coat shortly before the incision is made.

4. Grossich did not remove the iodine with 96 per cent. alcohol as Tavel does to prevent eczema and on account of possible catarrh of the mucous membrane.

The following facts were observed among others: The tincture of iodine must act for at least 5 minutes in order to inhibit movement and growth of the bacteria and to kill them. In the 100 cases observed by the author in Tavel's clinic it made no clinical difference in the wound healing when the iodine was washed off with 96 per cent. alcohol before the lapse of five minutes. In Tavel's clinic eczema was seldom caused by the iodine, even when 12 per cent. iodine was used. In operations on the intestines care was taken to wrap the eviscerated intestines in warm, damp compresses, and, so far as possible, to keep them from touching the skin; therefore they had none of the bad results from disinfection with tincture of iodine which some surgeons have observed. The iodine penetrates the stratum lucidum and it is to be assumed that it also penetrates the rete malpighi. The author thinks Grossich's disinfection with tincture of iodine is the simplest and surest method.—(*Surg., Gyn. and Obst.*, April, 1915.)

### A Recent Progress in Inhalation Anaesthesia.

One of the greatest advances in the administration of inhalation anesthesia has been the use of apparatus which limits the concentration of the vapor. The unpleasant by-effects of ether are almost entirely avoided if the concentration does not exceed 6 to 7 per cent. of the volume of the air breathed. D. Kulenkampff believes that anesthetization should be done with dilute ether vapor and supplemented, if necessary, with other anesthetics. Chloroform of low concentration, not over 1.7 volume per cent., is best. Mixtures of anesthetics should not be used, for the concentration of the different components differs and the concentration of the vapor actually given cannot be measured. Masks should be used that admit air freely and do not permit carbonic acid gas to collect. Free change of air with removal of CO<sub>2</sub> is the important thing, not the amount of oxygen obtained.

The anesthetist should look at the patient closely every minute or two and observe the slightest change in color and appearance. The patient's appearance and the fact that he is breathing freely are of much more importance than the condition of the pupillary and corneal reflexes and the pulse. Testing the corneal reflex does no good and may even be injurious.

\* The anesthesia should be kept as light as possible.



Very deep narcosis is rarely necessary; patients have in the past been kept under much deeper anesthesia than was necessary. Von Brunn holds that anesthesia should be stopped just at the boundary of the excitement stage, Kochmann just in the beginning of complete anesthesia. It is much better for the surgeon to exercise a little care and patience in the operation than for the patient to be given so much anesthetic that rougher treatment will not be noticed. The anesthesia should be kept as uniform as possible; sudden and frequent variations in the degree are dangerous. External rest, from avoidance of noise, etc., is less important than internal rest; that is, a quiet psychic condition of the patient. Therefore a good night's rest should be assured the night before.—(*Deutsche med. Wchnschr.*, April, 1915, by *Surg., Gynec. & Obst.*)

#### Gas Gangrene in War.

The worst septic complication of wounds that has been seen frequently during the present war is the so-called gas gangrene. There are a series of forms of this, and not all the cases are by any means necessarily identical with acute emphysematous gangrene. The cases as a rule begin as a cellulitis with much gas formation and rapid sloughing of tissues, and then gangrene eventually develops, running a rapid course. The causative agent has always so far been found to be some form of an anaerobic organism. It is not always the same organism. Pus is not produced in the early stages, but only sloughing and gas formation. Later on, if there is a reaction toward recovery, the pyogenic organisms gain a foothold and predominate in the condition, and pus is freely produced in the devitalized tissues. Frequent irrigation with hydrogen peroxid has done the most good. A stream of oxygen gas directly on the wound has given good results. "Lately Sir Almoth Wright has suggested placing gauze, wrung out of 5 per cent. salt solution, between the muscles and connective tissue planes, in order to encourage the outpouring of lymph. This has appeared to be an excellent method of treatment."—(*Journal A. M. A.*)

#### Lymphangioma.

E. A. Babler, St. Louis, reports a case of lymphangioma of the cecum which is of interest on account of its unusual location and the fact that it showed two of the types of Wegner in combination. The patient was a lad of 15, who complained of severe pain in the region of the appendix, which was diagnosed as appendicitis, and appendectomy was performed. The findings, however, were a lymphangioma attached to the cecum. The tumor was about 10 cm. in length and 6 cm. in thickness, irregularly oval in shape. It grew from the outer wall of the cecum. The appendix, which was removed, together with portions of the ileum and the cecum, was healthy. About 8 inches of the ileum and the entire ascending colon were excised, and a side-to-side anastomosis made with a Murphy button. The patient was discharged about two weeks after admission and made an uninterrupted recovery. The pathologic report is by Professor Welch, who says the most plausible explanation of this type of lymphangioma showing both cystic and cavernous form is attributed to some error in congenital development. Babler remarks that the case is also of interest on account of its close proximity to the appendix, as well as its infrequency of occurrence in the colon. The fact that congenital tumor may become intimately connected with the cecum and be subjected to inflammatory changes manifesting themselves by the high leukocyte count, severe abdominal pain,

vomiting, high temperature, and, in fact, all the usual manifestations of an infected appendix, is worthy of careful consideration.—(*J. A. M. A.*, Feb. 27.)

#### Syndesmorrhaphy and Syndesmoplasty.

C. E. Phillips coins two new words from the Greek word *syndesmos*, signifying the science of ligaments.

1. By syndesmorrhaphy is meant the simple suture or repair of ligaments.

2. Syndesmoplasty means a plastic operation on a ligament.

The subject of ruptured ligaments does not receive the attention its importance warrants. In fractures the broken bones tend to overlap and the process of repair is usually prompt and sufficient. In ruptured ligaments, however, the torn ends tend to retract, and in addition the process of repair is very feeble; hence the necessity for good approximation. Disability varies in proportion to the importance of the ligament broken and the amount of separation of the ends. A more careful examination should be made in the cases of severe sprains to determine the presence of ruptured ligaments. In many cases it may be necessary to make the examination under anaesthesia. When an abnormal mobility is demonstrated after the acute symptoms have subsided operative measures should be resorted to.

Rupture of the ligaments of the acromioclavicular joint is treated by the insertion of a mattress suture of silver wire. Ruptures of the ligaments of the knee are easily demonstrated and are treated by simple suture or by a syndesmoplastic operation. The internal lateral ligament may be reinforced by means of superimposing on it the tendon of the gracilis muscle. Other ligaments may require a transplantation of the ligamentous structures.

Operative conditions of the ligaments exist in the following cases:

1. In frank injuries where there is reasonable grounds for suspecting a completely ruptured ligament.

2. In old sprains where after the lapse of one or two months there is distinct abnormal mobility.

3. In cases of recurring sprains leading to frequent disabilities.

4. In compound sprains or compound dislocations an immediate or a late repair should never be omitted if there is a complete rupture of the ligaments and impairment of function.—*Surg., Gynec. & Obst.*, 1914,

#### Post Operative Discomfort.

The necessity for minimizing the discomfort to the patient after operation is emphasized by Baldwin (*West London Med. Jour.*) Among other points he touches on hemorrhoids.

When hemorrhoids are to be operated upon the rectum should be clean at the time of the operation, and the aperient which is commonly used should be given not later than the morning before the operation. Saline aperients are to be avoided, but castor oil is advantageous because of its after constipating effect.

He operates under local anesthesia and after the operative procedures are concluded, he injects sterile vaselin into the rectum, inserts a rubber tube  $3\frac{1}{2}$  inches long and  $\frac{3}{8}$  inch in diameter, allows it to project from the anus one inch and applies a dressing. The tube permits the flatus to escape. For postoperative vomiting he recommends copious drinks of bicarbonate of sodium and water. On the third or fourth morning after operation, he gives an ounce of castor oil by the mouth and four ounces of warm olive oil are injected into the bowel with a tube. The tube is then removed.